MECHANICAL GENERAL NOTES MECHANICAL CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE PROJECT SCOPE, UTILITY CONNECTIONS AND ALL BUILDING SERVICES. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES PRIOR TO THE FABRICATION OF DUCTWORK, OR INSTALLATION OF MECHANICAL EQUIPMENT AND PIPING. COORDINATE MECHANICAL EQUIPMENT AND DUCTWORK ABOVE CEILING AND IN INTERSTITIAL SPACE WITH LIGHTING FIXTURES, ELECTRICAL EQUIPMENT, AND PIPING TO MAINTAIN CLEARANCE FOR MAINTENANCE. 4. ALL DUCTWORK SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS IN INCHES. SUPPLY AND RETURN DUCTWORK IS EXTERNALLY INSULATED UNLESS OTHERWISE INDICATED. EXHAUST DUCTWORK IS NOT INSULATED UNLESS OTHERWISE INDICATED. ALL SUPPLY AND RETURN DUCTWORK INSTALLED IN MECHANICAL ROOMS SHALL BE EXTERNALLY INSULATED WITH RIGID DUCKBOARD INSULATION. FIRE/SMOKE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK PENETRATIONS THROUGH FIRE/SMOKE WALLS, FLOORS AND MECHANICAL FIRE RATED CHASES. DAMPERS SHALL MEET THE REQUIREMENTS OF THE FIRE/SMOKE WALL RATING AND BE "U.L." LABELED. SEE ARCHITECTURAL DRAWINGS FOR THE LOCATIONS OF ALL FIRE AND SMOKE WALLS. CEILING DIFFUSER LOCATIONS SHALL BE AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS. CEILING DIFFUSERS SHALL BE FOUR WAY THROW, UNLESS NOTED OTHERWISE MECHANICAL CONTRACTOR SHALL PAINT FLAT BLACK ANY ITEM WHICH MAY BE SEEN ABOVE CEILING THRU AIR DEVICES. 9. DRAWINGS ARE SCHEMATIC IN NATURE AND SHALL NOT BE SCALED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT ROUTING OF ALL SERVICES WITH EXISTING CONDITIONS AND WITH ALL OTHER TRADES. SEE SPECIFICATIONS FOR SERVICE PRIORITY. 10. THE MECHANICAL CONTRACTOR SHALL FURNISH ACCESS DOORS FOR INSTALLATION BY THE GENERAL CONTRACTOR IN WALLS AND CEILINGS WHERE ACCESS IS REQUIRED FOR CONCEALED VALVES, ADJUSTABLE EQUIPMENT, DAMPERS AND CONTROL DEVICES. COORDINATE THE LOCATION OF ANY DEVICE REQUIRING AN ACCESS PANEL WITH THE VAMC CONTRACTING OFFICER. VERIFY FINAL LOCATION OF THERMOSTATS WITH ARCHITECT PRIOR TO INSTALLATION. MOUNT AT 4'-6" ABOVE FINISHED FLOOR, UNLESS NOTED OR OTHERWISE INSTRUCTED. 12. WHERE WORK IN RENOVATED AREAS AFFECTS SYSTEMS IN OTHER AREAS OF THE HOSPITAL, THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE OWNER. THIS WORK SHALL BE DONE TO FIT HOSPITAL OPERATIONAL SCHEDULE AND MINIMIZE DISRUPTION AND DISCOMFORT TO OCCUPIED AREAS. 13. ALL DUCTWORK PENETRATIONS THRU THE INTERSTITIAL DECK SHALL BE SEALED AIR TIGHT AND CAULKED WITH AN APPROVED FIRE STOP MATERIAL. REFER TO DETAIL. 14. ALL STRAIGHT SECTION OF DUCTWORK SHALL BE A MINIMUM OF 22 GA. GALVANIZED OR STAINLESS STEEL, FITTINGS SHALL BE NO LESS THAN 20 GA. REFER TO SPECIFICATIONS. 15. DUCTWORK PENETRATING THE INTERSTITIAL SLAB SHALL MAINTAIN THE INTEGRITY OF THE INTERSTITIAL LEVEL. COORDINATE EXACT LOCATION OF DUCT PENETRATIONS WITH STRUCTURAL CONDITIONS, ELECTRICAL POWER GRID AND AIR DEVICE LOCATIONS. 16. IDENTIFY DUCTWORK AND PIPING BY STENCIL OR TAG TO DENOTE RESPECTIVE AHU NUMBER, CONTENTS AND DIRECTION OF FLOW. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. 17. COORDINATE MECHANICAL WORK WITH OTHER TRADES AND EXISTING CONDITIONS PRIOR TO INSTALLATION. 18. REPAIR ALL UNUSED OPENINGS THRU THE INTERSTITIAL SLAB TO MATCH THE EXISTING CONSTRUCTION OF THE INTERSTITIAL SLAB (SEE DETAILS). 19. COORDINATE LOCATION OF ALL NEW AIR DEVICES WITH NEW AND EXISTING LIGHTING FIXTURES.

AIR DEVICE SCHEDULE								
DEVICE TAG AT 100 - CFM 100 - SUPPLY 100R - RETURN 100E - EXHAUST			2. REFER	 FRAME STYLE SHALL MATCH CEILING TYPE. COORDINATE WITH ARCHITECTURAL CEILING PLANS. REFER TO AIR DEVICE CONNECTION SCHEDULE FOR GRILLE NECK AND DUCT RUNOUT SIZE UNLESS NOTED ON FLOOR PLAN. 				
DEVICE TAG	MANUFACTURER	MODEL	FACE SIZE	DESCRIPTION				
A	TITUS	OMNI	24/24	SQUARE PLAQUE SUPPLY AND RETURN DIFFUSER, ALUMINUM CONSTRUCTION. ROUND NECK. FINISH: WHITE				
В	TITUS	PAR	24/24	RETURN OR EXHAUST, PERFORATED FACE, HIGH PERFORMANCE. ALUMINUM CONSTRUCTION UNLESS NOTED DIFFERENTLY. ROUND NECK, FLEX SERVING GRILLE TO BE SAME AS NECK SIZE. FINISH: WHITE				

5. CONTROL VALVE TYPE SHALL MATCH EXISTING HOSPITAL.

			POV	NANV	NAINI	S.P. AT	MAX. P.D.	BOX INLET	DUCT RU	NOUT TO BOX			HEATIN	IG COIL			
TAG	MANUFACTURER	MODEL	BOX TYPE	MAX CFM	MIN CFM	INLET (IN) W.G.	THRUBOX (IN) W.G.	SIZE (IN)	ROUND	ALTERNATE RECTANGLE	EAT (°F)	LAT (°F)	BTUH	EWT (°F)	LWT (°F)	GPM	REMARKS
TU-99-49	TITUS	DESV	VAV	725	435	1.0	.35	10	12	16x8	55	95	18,800	160	140	1.9	1,2,3,4,5
TU-99-50	TITUS	DESV	VAV	600	360	2.0	.2	8	10	-	55	95	15,600	160	140	1.6	1,2,3,4,6
TU-99-51	TITUS	DESV	VAV	400	240	2.0	.2	6	8	-	55	95	10,400	160	140	1.0	1,2,3,4,5

MECHANICAL A	ABBREVIATIONS
AFF — ABOVE FINISHED FLOOR	OA - OUTSIDE AIR
(R) – RELOCATE	RA — RETURN AIR
(E) - EXISTING	SA - SUPPLY AIR
(N) — NEW	EA - EXHAUST AIR
(D) — DEMOLISH	TU - TERMINAL UNIT
NIC - NOT IN CONTRACT	VAV - VARIABLE AIR VOLUME
UNO - UNLESS NOTED OTHERWISE	CAV - CONSTANT AIR VOLUME
NC - NORMALLY CLOSED	RTU - ROOF TOP UNIT
NO - NORMALLY OPEN	CH - WATER COOLED CHILLER
BHP - BRAKE HORSEPOWER	ACCH - AIR COOLED CHILLER
PSIG – POUNDS PER SQUARE INCH (GAUGE PRESSURE)	ACCU - AIR COOLED CONDENSING UNI
CFM — CUBIC FEET PER MINUTE	FCU - FAN COIL UNIT
F — TEMPERATURE IN FAHRENHEIT	VFD - VARIABLE FREQUENCY DRIVE
DB - DRY BULB TEMPERATURE (OF)	CHP - CHILLED WATER PUMP
WB — WET BULB TEMPERATURE	CWP - CONDENSER WATER PUMP
EAT — ENTERING AIR TEMPERATURE	HWP - HOT WATER PUMP
LAT — LEAVING AIR TEMPERATURE	PRV - PRESSURE REDUCING VALVE
GPH — GALLONS PER HOUR	MVD - MANUAL VOLUME DAMPER
GPM — GALLONS PER MINUTE	SWR - SIDEWALL REGISTER
	OBD — OPPOSED BLADE DAMPER
	BDD — BACKDRAFT DAMPER

AIR DEVICE CONNECTION SCHEDULE						
THIS SCHEDULE APPLIES TO SUPPLY, RETURN, AND EXHAUST GRILLES, REGISTERS, AND DIFFUSERS.						
AIR	DEVICE	BRANCH DUCT SIZE				
QUANTITY (CFM)	NECK SIZE	ROUND DUCT	ALTERNATE RECTANGULAR DUCT			
0-100	6 " ø	6 " ø	8X4			
101-210	8"ø	8"ø	10X6			
211-380	10 " ø	10 " ø	10X8			
381-600	12 " ø	12 " ø	12X10			
601-900	14 " ø	14 " ø	16X10			
901-1300	16 " ø	16 " ø	18X12			

	- CURRING	GRILLE WITH AIR O		
<u> </u>				
	LICHT TR	OFFER WITH AIR O	WITH AIR QUANTITY	
<u></u>	10	THERMOSTAT		
—————————————————————————————————————		MAGNEHELIC DIFFERENTIAL PRESSURE GAUGE.		
~		MANUAL VOLUME DAMPER 90A		
~ ¬		ED VOLUME DAMPER		
$\frac{\sim}{\sim}$			<u> </u>	
~		FT DAMPER		
Ţ				
Ţ -			DAMPED	
§ FSD ☐		TION FIRE/SMOKE		
		DUNTED SMOKE DE		
	⊒	DUCT CONNECTIO	N .	
~ <u> </u>		DUCT ELEVATION		
		DUCT ELEVATION		
<u> </u>	SINGLE A	SINGLE AND DOUBLE LINE DUCT WORK		
36x24	RECTANG	RECTANGULAR DUCT WORK		
2 36ø	ROUND [ROUND DUCT WORK		
36x24ø	FLAT OVA	FLAT OVAL DUCT WORK		
	RADIUS E	RADIUS ELBOW		
	MITERED	MITERED ELBOW WITH TURNING VANES		
L L	BRANCH	BRANCH CONNECTION TO MAIN		
BELOW	DUCT CR	DUCT CROSS OVER		
R = RISE D =	ELEVATIO	ELEVATION CHANGE		
	A 100	. REGISTER		
16×12—— ♦ MVD	18x12 30x12 -16x14 16x12— SPLIT 20x12—	18x12 16x14 SPLIT	MAIN BRANCH DUCT SPLIT	
MVD MVD MVD 8×12—8"ø—8"ø—	30x12 18x12———————————————————————————————————	18x12 MVD 8"ø	SUB-BRANCH TAP AND TEE	
→→ {	TRANSITIO)NS	1	
<u></u>	DUCT WIT		₹	
		DUCT WITH INTERNAL LINER		
	【 ∤ [x] SUPPLY	SUPPLY DUCT UP, DOWN		
		DUCT UP, DOWN EXHAUST DUCT UF	P, DOWN	

DRAWING INDEX					
NUMBER	DRAWING TITLE				
M000	INFORMATION SHEET - MECHANICAL				
MD101	DEMOLITION INTERSTITIAL PLAN - MECHANICAL				
M201	FLOOR PLAN - MECHANICAL				
M202	INTERSTITIAL PLAN - MECHANICAL				
M301	DETAILS - MECHANICAL				

CONSTRUCTION DOCUMENTS SUBMISSION Project Number 580-13-403

B-100

Drawing Number

M000

Dwg. 18 of 40

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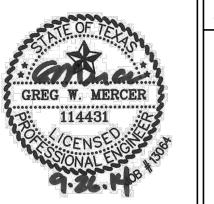


one eighth inch = one root

0 4 8 16

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2. PROVIDE CONTROL VOLTAGE TRANSFORMER.

3. LABEL INTERIOR THERMOSTAT FACE PLATE WITH TU BOX NUMBER ASSOCIATED AND SYSTEM.

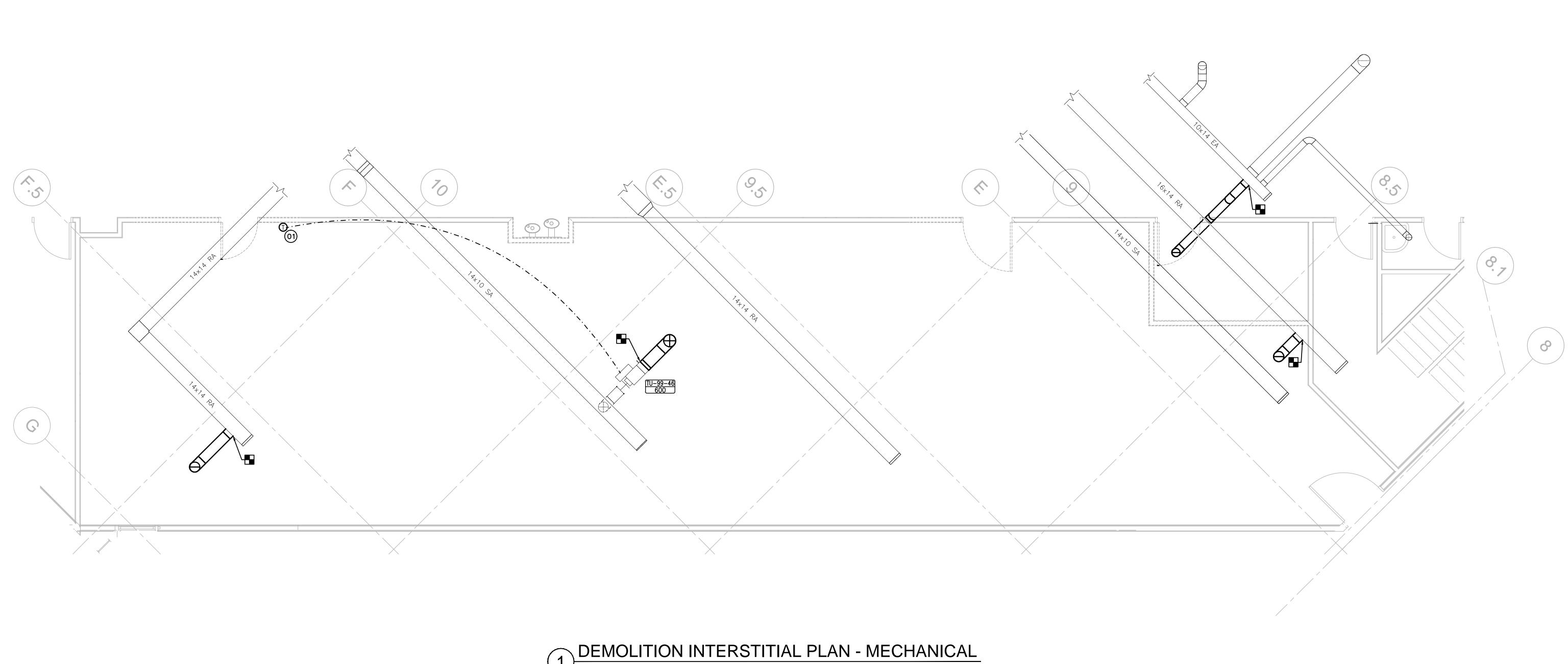


Drawing Title
INFORMATION SHEET 580-13-403: Renovate 2nd Floor B-100 for Diagnostic and Building Number MECHANICAL Therapy Care Line Approved: Project Director MEDICAL CENTER HOUSTON TX VAPAHCS PLANNING AND ENGINEERING

Office of Construction and Facilities Management

AEF

09/30/2014



DEMOLITION LEGEND				
SYMBOL DESCRIPTION				
	EXISTING TO REMAIN			
	EXISTING TO BE REMOVED			
•	DEMO TO THIS POINT			

GENERAL NOTES

- . DUCT OPENINGS NOT RE-USED THROUGH INTERSTITIAL SPACE LEVEL ABOVE SHALL BE PATCHED WITH DECKING AND SEALED TO MAINTAIN THE INTEGRITY OF THE EXISTING INTERSTITIAL FLOOR.
- THE CONTRACTOR SHALL REMOVE ALL MECHANICAL ITEMS SHOWN TO BE DEMOLISHED ON THE DRAWINGS. THIS INCLUDES ALL STRAPS, HANGERS, AND OTHER RELATED ITEMS THAT ARE PART OF THE EXISTING SYSTEM TO BE DEMOLISHED.
- 3. AT POINTS WHERE DEMOLISHED DUCT IS REMOVED FROM DUCT THAT IS TO REMAIN, THE CONTRACTOR SHALL CAP AND SEAL THE OPENING WITH A SHEET METAL PATCH PLATE. THE PATCH PLATE SHEET METAL GAUGE SHALL MATCH THE DUCT GAUGE. INSULATE THE PATCH PLATE TO MATCH THE EXISTING DUCT. SEAL VAPOR BARRIER OF NEW INSULATION TO THE
- BRANCH DUCTS SHOWN TO BE DEMOLISHED ARE TO BE REMOVED ALL THE WAY TO THE TRUNK, INCLUDING THE BRANCH TAP. INSULATE AND SEAL OPENING AS DESCRIBED ABOVE.
- OPENINGS IN WALLS WHERE EXISTING DUCTS HAVE BEEN REMOVED SHALL BE REPAIRED TO MATCH THE INTEGRITY OF THE WALL.
- . ALL PENETRATIONS THROUGH INTERSTITIAL FLOOR LEFT UN-USED SHALL BE CAPPED AND FILLED TO MATCH THE CONSTRUCTION OF THE EXISTING INTERSTITIAL DECK (SEE DETAIL).
- . THE CONTRACTOR SHALL REPLACE ALL SPRAYED ON FIREPROOFING THAT IS DAMAGED OR REMOVED DURING THE COURSE OF THE DEMOLITION OF HVAC EQUIPMENT, MATERIAL, HANGERS, SUPPORTS, ETC.
- . REMOVE THE INDICATED HVAC ITEMS AS SHOWN ON PLANS. VERIFY WITH OWNER PRIOR TO DEMOLITION WHICH HVAC ITEMS SCHEDULED FOR DEMOLITION ARE TO BE TURNED OVER TO THE OWNER FOR FUTURE USE. ALL HVAC ITEMS THAT ARE TO BE TURNED OVER TO THE OWNER SHALL BE TURNED OVER IN CONDITION EQUAL TO THAT PRIOR TO BEING REMOVED. THE CONTRACTOR SHALL REMOVE FROM SITE ALL DEMOLISHED ITEMS NOT WANTED BY THE OWNER.

KEYED NOTES

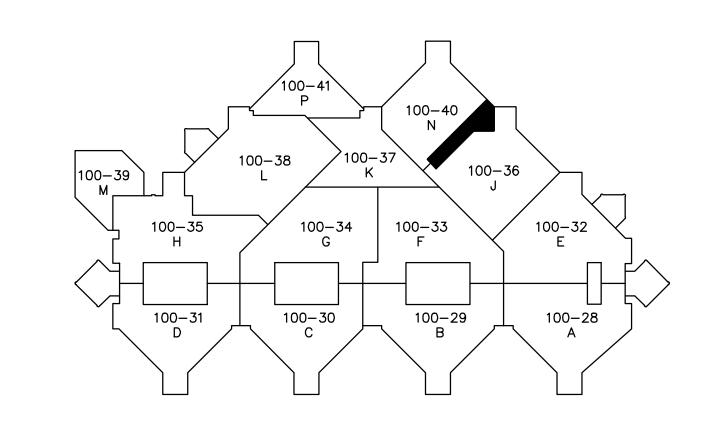
01) THERMOSTAT TO BE RELOCATED TO LOCATION SHOWN ON FLOOR PLAN

ALTERNATES

REFER TO ARCHITECTURAL PLANS FOR FOR ALTERNATE DEFINITIONS. ALTERNATE #1 - PATIENT ROOM 1A-511 TO BE A STORAGE ROOM WITH 1 HOUR RATED CONSTRUCTION AND RATED DOOR FRAME AND HARDWARE. NO MECHANICAL DEDUCTS FOR THIS ALTERNATE.

ALTERNATE #2 - PATIENT ROOM 1A-512 TO BE A STORAGE ROOMS WITH 1 HOUR RATED CONSTRUCTION AND RATED DOOR FRAME AND HARDWARE. NO MECHANICAL DEDUCTS FOR PATIENT ROOM

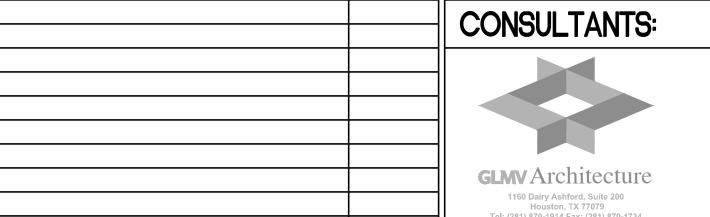
> TOILET 503A TO BE TURNED INTO A STORAGE ROOM. REMOVE EXHAUST GRILLE FROM SCOPE AND PROVIDE RETURN AIR GRILLE CONNECTED TO NEAREST RETURN AIR DUCT. RETURN AIR GRILLE SHALL BE BALANCED TO 50 CFM.



Dwg. 19 of 40

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CONSTRUCTION DOCUMENTS SUBMISSION



wg - Friday, Sentember

Garner-Fritsche ENGINEERING, INC. 6565 West Loop South, Suite 560, Bellaire, TX 77401 713.432.1422 - Fax 713.432.1253 www.garnerfritsche.com Texas Reg. No. F-5712 GFE Project No. 13064

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Drawing Title
DEMOLITION INTERSTITIAL PLAN MECHANICAL Approved: Project Director

VAPAHCS PLANNING AND ENGINEERING

Floor B-100 for Diagnostic and Building Number Therapy Care Line MEDICAL CENTER HOUSTON TX

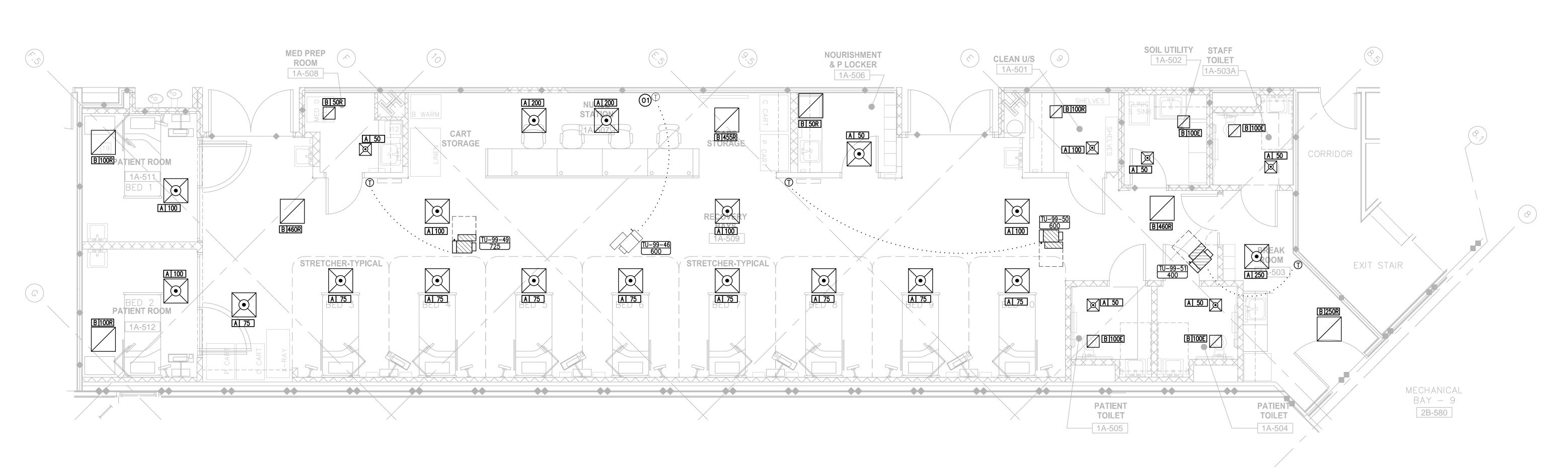
09/30/2014

AEF

Project Number 580-13-403 580-13-403: Renovate 2nd B-100 Drawing Number Checked

GWM

Office of Construction and Facilities Management



REN	RENOVATION LEGEND				
SYMBOL DESCRIPTION					
	EXISTING TO REMAIN				
CONNECT AT THIS POINT					

(01) RELOCATE EXISTING THERMOSTAT CONTROLLING EXISTING BOX INDICATED ON PLANS TO LOCATION SHOWN. MODIFY AND PROVIDE NEW CONTROL WIRING AS REQUIRED.

ALTERNATES

REFER TO ARCHITECTURAL PLANS FOR FOR ALTERNATE DEFINITIONS.

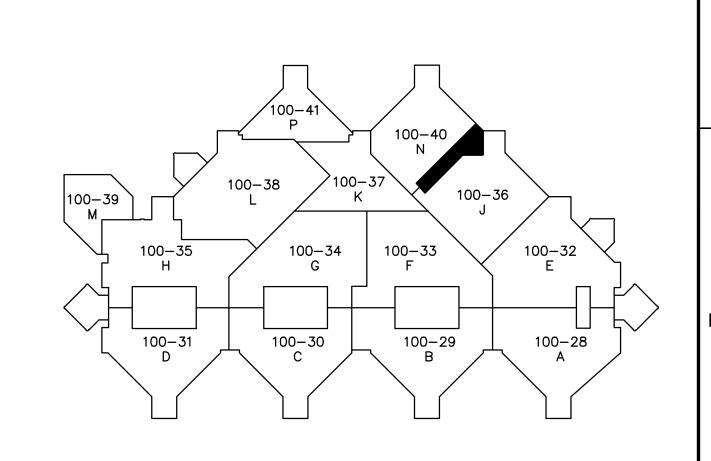
ALTERNATE #1 — PATIENT ROOM 1A-511 TO BE A STORAGE ROOM WITH 1 HOUR RATED CONSTRUCTION AND RATED DOOR FRAME AND HARDWARE. NO MECHANICAL DEDUCTS FOR THIS ALTERNATE.

ALTERNATE #2 — PATIENT ROOM 1A-512 TO BE A STORAGE ROOMS WITH 1 HOUR RATED CONSTRUCTION AND RATED DOOR FRAME AND HARDWARE. NO MECHANICAL DEDUCTS FOR PATIENT ROOM 1A-512.

TOILET 503A TO BE TURNED INTO A STORAGE ROOM. REMOVE EXHAUST GRILLE FROM SCOPE AND PROVIDE RETURN AIR GRILLE CONNECTED TO NEAREST RETURN AIR DUCT. RETURN AIR GRILLE SHALL BE BALANCED TO 50 CFM.

FLOOR PLAN - MECHANICAL

SCALE: 1/4" = 1'-0"



CONSTRUCTION DOCUMENTS SUBMISSION

Dwg. 20 of 40



one quarter inch = one to the distance of the

6565 West Loop South, Suite 560, Bellaire, TX 77401
713.432.1422 - Fax 713.432.1253
www.garnerfritsche.com
Texas Reg. No. F-5712
GFE Project No. 13064



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Drawing Title	
FLOOR PLAN	
MECHANICAL	
Approved: Project Director	
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VAPAHCS PLANNING AND ENGINEERING

Project Title
580-13-403: Renovate 2nd
Floor B-100 for Diagnostic and
Therapy Care Line

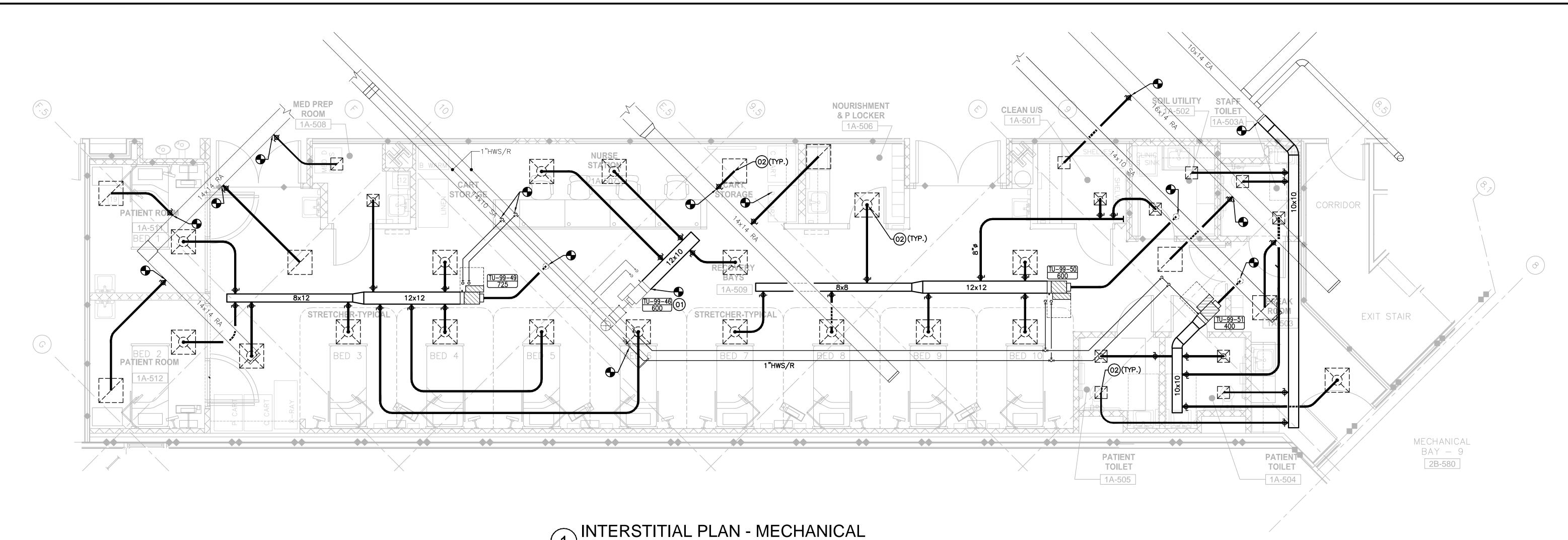
Date	Checked	Drawn	Project Number	580-13-403	
Date	Checked	Drawn	Project Number	580-13-403	
Building Number	B-100				
Drawing Number	M201				
Main	Main	M201	M201		
Date	Checked	Drawn	Drawn	M201	
Date	Checked	Drawn	Drawn	Drawn	M201
Date	Checked	Drawn			

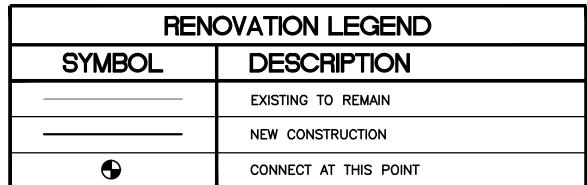
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09/30/2014

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GENERAL NOTES

- DUCT BRANCHES DROP DOWN THRU INTERSTITIAL SPACE UNLESS NOTED OTHERWISE. REFER TO FLOOR PLAN FOR AIR TERMINAL OUTLETS.
- . INTERSTITIAL OPENINGS NOT REUSED IN RENOVATION PHASE SHALL BE PATCHED TO MAINTAIN INTEGRITY OF FLOOR. REFER TO DETAILS.
- REFER TO GENERAL NOTES ON SHEET MOOD FOR ADDITIONAL INFORMATION.
- 4. ALL EQUIPMENT, DUCTWORK AND RELATED ITEMS SHALL NOT OBSTRUCT DESIGNATED SERVICE WALK PATH.
- REFER TO SHEET M201 FOR LOCATION OF EXISTING THERMOSTATS AND THERMOSTATS THAT ARE TO BE RELOCATED. TERMINAL UNIT LABEL/NUMBER IS INDICATED NEXT TO EACH THERMOSTAT ON SHEET

KEYED NOTES

- 01) RE-BALANCE EXISTING TERMINAL UNIT TO CFM INDICATED. UPDATE
- 02) DUCTWORK PENETRATION THROUGH INTERSTITIAL FLOOR TO AIR DEVICE. PROVIDE NEW PENETRATION PER DETAILS.

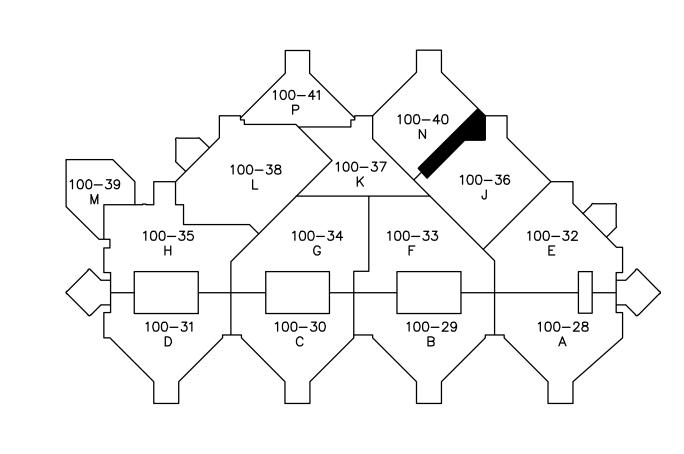
ALTERNATES

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HARDWARE. NO MECHANICAL DEDUCTS FOR THIS ALTERNATE. ALTERNATE #2 - PATIENT ROOM 1A-512 TO BE A STORAGE ROOMS WITH 1

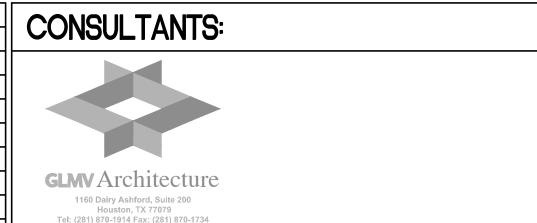
HOUR RATED CONSTRUCTION AND RATED DOOR FRAME AND HARDWARE. NO MECHANICAL DEDUCTS FOR PATIENT ROOM

TOILET 503A TO BE TURNED INTO A STORAGE ROOM. REMOVE EXHAUST GRILLE FROM SCOPE AND PROVIDE RETURN AIR GRILLE CONNECTED TO NEAREST RETURN AIR DUCT. RETURN AIR GRILLE SHALL BE BALANCED TO 50 CFM.



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one eighth inch = one foot

4 8 16

HELLER HELLER HELLER



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SCALE: 1/4" = 1'-0"

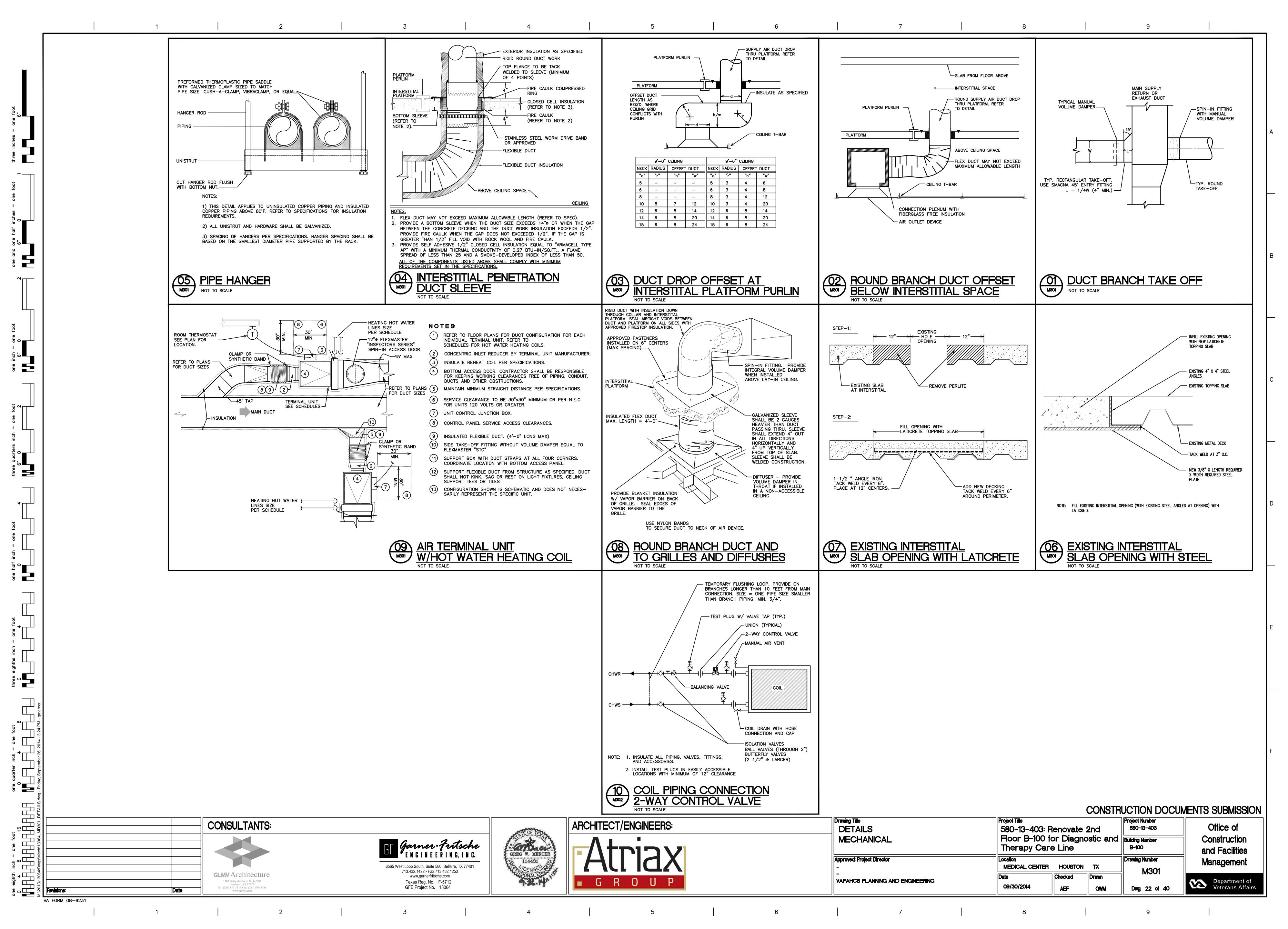


INTERSTITIAL PLAN MECHANICAL	Floor B-100 Therapy Car
Approved: Project Director -	Location MEDICAL CENTER

VAPAHCS PLANNING AND ENGINEERING

580-13-403: R	580-13-403		
Floor B-100 fo Therapy Care	Building Number B-100		
Location MEDICAL CENTER	Drawing Number M202		
Date	Checked	Drawn	IVIZOZ
09/30/2014	AEF	GWM	Dwg. 21 of 40

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SYMBOL LEGEND SYMBOL | DESCRIPTION 3/4" C. UNLESS OTHERWISE NOTED, LONG HATCH INDICATES NEUTRAL, SHORT HATCH INDICATES PHASE, "Z" INDICATES INSULATED, ISOLATED GROUND, "S" INDICATES SWITCH LEG. NO HATCHES INDICATES THREE CONDUCTORS. PARTIAL HOMERUN, CONDUIT IN CEILING OR WALL. DASHED INDICATES CONDUIT SEALED BELOW FLOOR, SLAB OR GRADE. EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED EMERGENCY LIGHTING UNIT EQUIPMENT LIGHTING FIXTURE WITH INDICATED HATCHING — CRITICAL BRANCH LIGHTING FIXTURE WITH INDICATED HATCHING - LIFE SAFETY BRANCH SINGLE POLE SWITCH, 20A-120/277V \$3 3-WAY SWITCH, 20A-120/277V **\$**^K | KEYED SWITCH, 20A-120/277V WALL DIMMER SWITCH, SIZE AND TYPE AS REQUIRED WALL MOUNTED OCCUPANCY SENSOR CEILING MOUNTED OCCUPANCY SENSOR, DUAL TECHNOLOGY TWO SINGLE POLE SWITCHES UNDER COMMON COVERPLATE FOR DUAL LEVEL SWITCHING. THE SWITCH CLOSEST TO THE DOOR SHALL CONTROL THE CENTER LAMP OF THE LIGHT FIXTURE AND THE REMAINING SWITCH THE OUTER LAMPS. PUSH BUTTON SWITCH TIME SWITCH hospital grade duplex receptacle, 20a-125V, Nema 5-20R # HOSPITAL GRADE DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE | 125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE HOSPITAL GRADE EMERGENCY POWERED RED SIMPLEX RECEPTACLE, 20A-125V, HOSPITAL GRADE EMERGENCY POWERED RED DUPLEX RECEPTACLE 20A-125V, NEMA 5-20R DUPLEX RECEPTACLE, 20A-125V, NEMA 5-20R MOUNTED HORIZONTALLY ABOVE COUNTER TOP, VERIFY ELEVATION WITH ARCHITECT DUPLEX RECEPTACLE, 20A-125V, NEMA 5-20R WEATHERPROOF WITH "IN-USE" COVER AND GFI RATING FLUSH FLOOR DUPLEX RECEPTACLE OUTLET AND DATA OUTLET JUNCTION BOX, FLUSH FLOOR MOUNTED ■ TWO CHANNEL POWER/COMMUNICATIONS POWER POLE WALL MOUNTED TELEPHONE OUTLET WITH 3/4" C. TO ACCESSIBLE CEILING SPACE WALL MOUNTED TELE/DATA OUTLET WITH 3/4" C. TO ACCESSIBLE CEILING SPACE WALL MOUNTED DATA OUTLET WITH 3/4" C. TO ACCESSIBLE AREA ABOVE CEILING DATA OUTLET MOUNTED HORIZONTALLY ABOVE COUNTER TOP WITH 3/4" C. TO ACCESSIBLE AREA ABOVE CEILING, VERIFY ELEVATION WITH ARCHITECT PLYWOOD TELEPHONE BACKBOARD ▼ COAX CATV BROADBAND TELEVISION OUTLET SPEAKER AMPLIFIER MICROPHONE OUTLET REMOTE SOURCE AUDIO MIXER SECURITY SYSTEM AUDIO SENSOR KP KEYPAD CR CARD READER PUSH BUTTON WALL MOUNTED SECURITY SYSTEM MOTION SENSOR DOOR CONTACT FOR SECURITY SYSTEM CHIME/BUZZER CONTACTOR TIME CLOCK 1-PHASE MOTOR, MAKE FINAL MOTOR CONNECTION 3-PHASE MOTOR, MAKE FINAL MOTOR CONNECTION DISCONNECT SWITCH, 30A/3/NF U.N.O. COMBINATION MOTOR STARTER/DISCONNECT, 30A/3/NF/'0' U.N.O. MOTOR STARTER MANUAL MOTOR SWITCH AS REQUIRED VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER SINGLE CIRCUIT BREAKER ___ SWITCH ----FUSE CONTACTS 277/480 VOLT DISTRIBUTION OR PANELBOARD 120/208 VOLT PANELBOARD TRANSFORMER GENERATOR ANNUNCIATOR GAP PANEL

	ABBREVIATIONS
ABBR.	DESCRIPTION
AMP	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
BFG	BELOW FINISHED GRADE
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
C.O.	CONDUIT ONLY WITH PULL STRING
DISC	DISCONNECT
E	EXISTING TO REMAIN
EDF	ELECTRIC DRINKING FOUNTAIN
EF	EXHAUST FAN
ELEV	ELEVATION
FCA	FAULT CURRENT AVAILABLE
FCU	FAN COIL UNIT
FLA	FULL LOAD AMPS
FSD	FIRE AND SMOKE DAMPER
GFI	GROUND FAULT INTERRUPTER
GRD	GROUND
IG	ISOLATED GROUND
KCMIL	CIRCULAR MILS, THOUSANDS
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KW	KILOWATT
MCB	MAIN CIRCUIT BREAKER
мсс	MOTOR CONTROL CENTER
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NF	NON FUSED
NL	NIGHT LIGHT
NTS	NOT TO SCALE
PH, Ø	PHASE
PNL	PANELBOARD
PVC	POLYVINYL CHLORIDE CONDUIT
RECEPT	RECEPTACLE
TL	TWIST LOCK TYPE
TTB	TELEPHONE TERMINAL BOARD
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UGE	UNDERGROUND ELECTRIC
U.N.O.	UNLESS NOTED OTHERWISE
٧	VOLT
VA	VOLT-AMPERE
WH	WATER HEATER
WG	WIREGUARD
WP	WEATHERPROOF
WP-L	WEATHERPROOF "L" INDICATES LOCKABLE COVER
XFMR	TRANSFORMER

NOTE	EVERY CVAROL CHOWN ON LEGEND MAY NOT ARREAD ON RRAWINGS. REFER TO
	EVERY SYMBOL SHOWN ON LEGEND MAY NOT APPEAR ON DRAWINGS. REFER TO AL ELECTRICAL NOTES FOR WALL—MOUNTED DEVICE MOUNTING HEIGHTS.
	FOOT ADDED TO ANY SYMBOL INDICATES WALL MOUNTED.
ΗF	MANUAL FIRE ALARM PULL STATION.
F⋈	FIRE ALARM SPEAKER OR HORN. SUBSCRIPT "WP" INDICATES WEATHER PROOF DEVICE. REFERENCE DIV. 26 SPECIFICATIONS FOR SPEAKER AND/OR HORN APPLICATIONS.
Æ<	COMBINATION SPEAKER OR HORN AND STROBE IN SINGLE COVER. SUBSCRIPT "W" INDICATES WHITE FINISH; OTHERWISE STANDARD RED COLOR. "V" INDICATES LOCAL VOICE EVACUATION SPEAKER FUNCTIONS, "H" INDICATES HIGH VOLUME SPEAKER FUNCTIONS, REFERENCE DIV. 26 SPECIFICATIONS FOR SPEAKER AND/OR HORN APPLICATIONS.
極	VISUAL ALARM STROBE. SUBSCRIPT "W" INDICATES WHITE FINISH; OTHERWISE STANDAR RED COLOR.ALL VISUAL ALARM STROBES ARE 15/75cd UNLESS OTHERWISE NOTED.
<u>(S)</u>	SMOKE DETECTOR. NO SUBSCRIPT INDICATES IONIZATION TYPE; "P" INDICATES PHOTOELECTRIC TYPE; "D" INDICATES DUCT TYPE AND PHOTOELECTRIC; "A" INDICATES ABOVE CEILING AND PHOTOELECTRIC; "U" INDICATES UNDER RAISED FLOOR AND PHOTOELECTRIC; "S" INDICATES SINGLE STATION TYPE AND PHOTOELECTRIC.
Ф	HEAT DETECTOR; COMBINATION RATE OF RISE AND FIXED TEMPERATURE. "F" INDICAT FIXED TEMPERATURE ONLY; "R" INDICATES RATE OF RISE ONLY. "C" INDICATES RATE COMPENSATION TYPE.
©	CARBON MONOXIDE DETECTOR.
$\left\langle \mathbb{B}\right\rangle _{T}$	BEAM SMOKE DETECTOR. "T" INDICATES TRANSMITTER. "R" INDICATES RECEIVER
łΤ	FIRE FIGHTER'S TELEPHONE JACK. "H" INDICATES PERMANENT EMERGENCY TELEPHONE HANDSET.
R ₂	AUXILIARY CONTROL RELAY. "2" INDICATES TWO RELAYS REQUIRED FOR FIRE FIGHTEI OVERRIDE CONTROL.
D	FIRE/SMOKE DUCT DAMPER WITH MOTOR ACTUATOR (BY DIV. 25). PROVIDE FIRE ALARM CONTROL RELAYS AND ADDRESSABLE MODULE.
FTC	TERMINAL CABINET FOR FIRE ALARM SYSTEM WIRING.
FCP	FIRE ALARM CONTROL PANEL.
FAA	FIRE ALARM ANNUNCIATOR PANEL.
FTR	FIRE ALARM TRANSPONDER.
GV	SPRINKLER SYSTEM GATE VALVE MONITOR SWITCH.
FS	SPRINKLER SYSTEM WATER FLOW SWITCH.
TS	TAMPER SWITCH.
CV	SPRINKLER SYSTEM ALARM CHECK VALVE.
PA	SPRINKLER SYSTEM PRE-ACTION CONTROL PANEL.
DH	DOOR HOLDER.

	LIGHT FIXTURE SCHEDULE							
MARK MANUFACTURER AND CATALOG NUMBER MOUNTING LAMPS NO. TYPE VOLTS REMARKS								
Α	LIITHONIA LIGHTING VT SERIES	LAY-IN	2	2-F32T8 3500°K	MVOLT	2'X4' FLUORESCENT TROFFER WITH ACRYLILC PRISMATIC LENS.		
AD	LIITHONIA LIGHTING VT SERIES	LAY-IN	2	2-F32T8 3500°K	MVOLT	2'X4' FLUORESCENT TROFFER WITH ACRYLILC PRISMATIC LENS. PROVIDE DIMMABLE BALLAST.		
В	LITHONIA LIGHTING VT SERIES	LAY-IN	2	2-17W	MVOLT	2'X2' FLUORESCENT TROFFER WITH ACRYLILC PRISMATIC LENS.		
С	LITHONIA LIGHTING AFV SERIES OR EQUIVALENT TO VA FIXTURE TYPE "E/N-38"	RECESSED	1	26W TRT 3500K	MVOLT	8" OPEN CLEAR REFLECTOR COMPACT FLUORESCENT DOWNLIGHT.		
X	LITHONIA LIGHTING LQM SERIES OR EQUIVALENT TO VA FIXTURE TYPE "E/N-9"	SURFACE	1	L.E.D.	MVOLT	LONG LIFE LED PRECISION-MOLDED THERMOPLASTIC EXIT SIGN.		

LIGHT FIXTURE SCHEDULE GENERAL NOTES

REFER TO PLANS

1. REFER TO THE GENERAL NOTES ON THE INFORMATION SHEET AND LIGHTING PLAN FOR ADDITIONAL INFORMATION.

- 2. COMPLETE LIGHTING FIXTURE MANUFACTURER PART NUMBERS ARE NOT SHOWN BUT SHALL BE OBTAINED FROM THE COMBINATION OF THE SERIES NUMBER, NUMBER OF LAMPS, TYPE OF LAMPS, VOLTAGE, AND DESCRIPTION. THE COMPLETE PART NUMBER FOR EACH LIGHT FIXTURE SHALL INCORPORATE THE REQUIREMENTS SHOWN ON THE LIGHT FIXTURE SCHEDULE, DRAWINGS, AND CONTRACT DOCUMENTS.
- 3. THE EXACT QUANTITY OF BALLASTS NEEDED PER FIXTURE SHALL BE IDENTIFIED VIA THE SWITCHING INDICATED ON THE LIGHTING PLANS. FOR EXAMPLE, IF THE FIXTURE IS SHOWN TO BE DUAL SWITCHED, THEN PROVIDE TWO OR MORE BALLASTS TO ACCOMMODATE THE SWITCHING SCHEME.
- 4. EACH BALLAST SHALL BE ELECTRONIC, HAVE A TOTAL HARMONIC DISTORTION LESS THAN OR EQUAL TO 10%, AND A SOUND RATING OF A. PROVIDE DIMMING BALLAST(S) AS NEEDED. IN THE EVENT ONE LAMP IS TO FAIL, BALLAST SHALL BE CAPABLE OF CONTINUING POWER TO THE OTHER LAMP(S) WITHIN THE FIXTURE.
- 5. LABEL ALL BALLASTS USING A PERMANENT BLACK MARKING PEN IDENTITY THE LIGHTING UN-SWITCHED CIRCUIT.
- 6. LAMP COLOR TEMPERATURE SHALL BE 3500K UNLESS INDICATED OTHERWISE IN OWNER GUIDELINES; CONFIRM EXACT COLOR TEMPERATURE OF LAMPS WITH OWNER PRIOR TO PURCHASING. MINIMUM LAMP CRI SHALL BE 85.
- FIXTURE MOUNTING HARDWARE & FINISH
 7. CONFIRM ALL CEILING TYPES, FINISHES, MOUNTING HARDWARE REQUIRED, AND PROJECT CONDITIONS WITH OWNER PRIOR TO ORDERING NEW LIGHTING FIXTURES, LAMPS, AND BALLAST.
- EMERGENCY BATTERY PACKS 1 LAMP

 8. PROVIDE UL LISTED BATTERY PACK FOR EMERGENCY FIXTURES WITH A SINGLE LAMP. THE NEW BATTERY PACK IS TO BE FACTORY INSTALLED AND PART OF EMERGENCY SYSTEM INTEGRAL TO
- THE LIGHTING FIXTURE. EMERGENCY BATTERY PACKS - 2 LAMPS OR MORE
- 9. PROVIDE UL LISTED PARALLEL CIRCUIT BATTERY PACK (IOTA I-232 OR EQUIVALENT) FOR EMERGENCY FIXTURES WITH TWO LAMPS OR MORE. THE NEW BATTERY PACK IS TO BE FACTORY INSTALLED AND PART OF EMERGENCY SYSTEM INTEGRAL TO THE LIGHTING FIXTURE. IN THE EVENT A SINGLE EMERGENCY LAMP WERE TO MALFUNCTION, THE PARALLEL WIRING OF THE BATTERY PACK SHALL ALLOW FOR EMERGENCY ILLUMINATION VIA ANOTHER LAMP.
- EMERGENCY BATTERY FEATURES

 10. THE BATTERY PACK SHALL HAVE A TEST SWITCH, AN LED CHARGING INDICATOR, NICKEL—CADMIUM BATTERY, AND A 7—10 YEAR LIFE EXPECTANCY.
- EMERGENCY BATTERY PACK ILLUMINATION

 11. THE BATTERY PACK SHALL PROVIDE ILLUMINATION FOR AT LEAST 90 MINUTES OF CONTINUOUS OPERATION.
- EMERGENCY BATTERY PACK CIRCUIT AND CONNECTIONS 12. PROVIDE AN UNSWITCHED CONDUCTOR FROM THE SAME CIRCUIT SUPPLYING THE EMERGENCY FIXTURE TO THE BATTERY PACK SENSE LEAD.
- EMERGENCY BATTERY PACK OPERATION
- 13. EMERGENCY LIGHTING SHALL OPERATE IN SUCH A WAY THAT IN EVENT THE NEAREST LIGHTING FIXTURE LOSES POWER/ELECTRICITY, THE EMERGENCY FIXTURE BATTERY PACK SHALL SENSE THE POWER LOSS AND AUTOMATICALLY PROVIDE ILLUMINATION FOR THE AREA.
- 14. ALL LIGHT FIXTURES SHALL BE INSTALLED PER N.E.C. 410.16.
- 15. MANUFACTURERS OTHER THAN THOSE LISTED IN THE DRAWINGS ARE ACCEPTABLE; REFER TO THE SPECIFICATIONS IF APPLICABLE. SHOULD THE CONTRACTOR SELECT A DIFFERENT MANUFACTURER THAN THOSE LISTED OR SPECIFIED, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THAT ALL FIXTURES AND REQUIRED ACCESSORIES ARE EQUIVALENT AND SUITABLE FOR PROJECT CONDITIONS (CEILING TYPES, ENVIRONMENT, SPACE LIMITATIONS, LIGHT DISTRIBUTION, ETC.) THE OWNER MUST ALSO GIVE APPROVAL OF PROPOSED MANUFACTURER(S).
- SUBMITTALS 16. SUBMISSION OF VENDOR/SHOP DRAWINGS FOR APPROVAL SHALL BE CONSTRUED THAT ALL CONTRACT DOCUMENT LIGHTING REQUIREMENTS HAVE BEEN INCLUDED AND THAT THE CONTRACTOR HAS VERIFIED EVERY LIGHTING FIXTURE VOLTAGE, QUANTITY OF BALLASTS, QUANTITY OF LAMPS, LAMP COLOR TEMPERATURE, AND MOUNTING WITH THE BUILDING CONDITIONS.

GENERAL NOTES

- ALL ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND START OF CONSTRUCTION TO DETERMINE THE EXISTING CONDITION OF THE ELECTRICAL SYSTEMS AND DEVICES. CONTRACTOR WILL BE RESPONSIBLE FOR REVIEWING ANY DOCUMENTATION WHICH REFLECT THE EXISTING CONDITIONS. COORDINATE ALL OUTLET/DEVICE LOCATION, CONNECTION TYPE, AND TERMINATION REQUIREMENTS WITH OTHER DISCIPLINES, ARCHITECTURAL PLANS AND EQUIPMENT INSTALLERS/MANUFACTURERS PRIOR TO ROUGH-IN.
- 2. ALL WORK SHALL COMPLY WITH ALL PERTINENT NATIONAL, AMERICAN DISABILITIES ACT (ADA), STATE, LOCAL ORDINANCE CODES AND REQUIREMENTS.
- 3. ALL EQUIPMENT, MATERIALS, AND INSTALLATION METHODS AS OUTLINED IN THE SPECIFICATIONS SHALL APPLY TO THIS PROJECT.
- 4. ELECTRICAL GENERAL NOTES ON ANY SHEET SHALL APPLY TO ALL OTHER ELECTRICAL SHEETS UNLESS INDICATED OTHERWISE.
- 5. STANDARD DETAILS ILLUSTRATED ON THE DRAWINGS SHALL BE APPLIED IN ALL CASES WHERE THE FEATURE OCCURS IN THE SYSTEM DESIGN.
- 6. PROVIDE ALL NEW CONDUIT AND COMPRESSION FITTINGS UNLESS NOTED OTHERWISE. MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS INDICATED OTHERWISE.
- 7. ALL NEW CONDUIT IS TO BE ROUTED IN THE INTERSTITIAL AND LABELED TO MATCH THE VA STANDARDS.
- 8. CONTRACTOR SHALL USE COMPRESSION FITTINGS.

MM | MONITOR MODULE

- 9. ALL OUTDOOR CONDUIT SHALL BE LISTED AND SUITABLE FOR THE ENVIRONMENT WHICH IT'S TO BE INSTALLED IN (NEC 300.6). IN ADDITION, NEW CONDUIT EXPOSED TO THE WEATHER SHALL BE LISTED AS SUNLIGHT RESISTANT. ALL CONDUIT COUPLING AND CONNECTOR'S EXPOSED TO THE OUTSIDE SHALL BE WEATHERPROOF, RAINPROOF, AND RAINTIGHT/WATERTIGHT.
- 10. PROVIDE ALL NEW CONDUCTORS UNLESS NOTED OTHERWISE. CONDUCTORS SHALL BE COPPER AND RATED NO LESS THAN 75 DEGREES CELSIUS. CONDUCTOR TERMINATIONS SHALL MATCH OR EXCEED THE RATING OF THE CONDUCTORS.
- 11. ALL WIRING AND CABLING SHALL BE INSTALLED IN CONDUIT UNLESS NOTED OTHERWISE.
- 12. THE MINIMUM WIRE SIZE FOR ALL NEW CONDUCTORS SHALL BE #12 AWG COPPER FOR ALL SHORT DISTANCE RUNS. ALL 120V AND 277 CIRCUIT CONDUCTORS EXCEEDING 50 FEET (100 FEET FOR 277V) IN LENGTH SHALL BE AT MINIMUM OF #10 WIRE. THE LARGEST CONDUCTOR SIZE SHALL BE USED IF ANY DISCREPANCY BETWEEN THE CONSTRUCTION DOCUMENTS AND/OR BUILDING STANDARDS OCCUR.
- 13. RAISE, OFFSET, LOWER, AND EXTEND EXISTING BRANCH CIRCUITS AS NEEDED.
- 14. JUNCTION BOXES MUST BE INDEPENDENTLY MOUNTED ON GALVANIZED STEEL CHANNELS AND PER NEC. FOR ALL JUNCTION BOXES THAT ARE PART OF THE SCOPE, PERMANENTLY MARK ON THE COVER PLATE THE ASSOCIATED CIRCUIT NUMBER AND VOLTAGE.
- 15. PROVIDE NEW THERMAL MAGNETIC CIRCUIT BREAKERS FOR ALL EQUIPMENT AND DEVICES UNLESS INDICATED OTHERWISE. THE NEW CIRCUIT BREAKER SHALL MATCH THE PANELBOARD'S MANUFACTURER, BREAKER TYPE (THERMAL MAGNETIC OR GREATER), A.I.C. RATING, AND SHALL BE FULLY RATED (NO SERIES RATING ALLOWED). PROVIDE HACR TYPE CIRCUIT BREAKERS FOR ALL HEATING, AIR CONDITIONING, AND REFRIGERATION EQUIPMENT. UPDATE THE PANELBOARD DIRECTORY AS REQUIRED.
- 16. IN THE EVENT ANY DISCREPANCIES OCCUR BETWEEN ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND OTHER DRAWINGS OR SPECIFICATIONS; CONTRACTOR IS TO INCORPORATE IN THE BID PRICE THE MOST STRINGENT OPTION. CONTRACTOR SHALL PROVIDE ALL NECESSARY ADDITIONAL ELECTRICAL COMPONENTS IF EQUIPMENT PURCHASED DIFFERS FROM WHAT IS SPECIFIED IN THE CONTRACT DOCUMENTS.

DRAWING INDEX						
NUMBER	DRAWING TITLE					
E000	INFORMATION SHEET — ELECTRICAL					
E001	ONE LINE DIAGRAM — ELECTRICAL					
E002	PANEL SCHEDULES — ELECTRICAL					
ED100	DEMOLITION PLAN — ELECTRICAL					
E101	LIGHTING PLAN — ELECTRICAL					
E201	POWER PLAN — ELECTRICAL					
E301	SPECIAL SYSTEMS PLAN - ELECTRICAL					
E401	DETAILS — ELECTRICAL					

CONSTRUCTION DOCUMENTS SUBMISSION

CONSULTANTS: **GLMV** Architecture 1160 Dalry Ashford, Sulte 200 Houston, TX 77079

Tel: (281) 870-1914 Fax: (281) 870-1734

1. NOT ALL SYMBOLS MAY BE USED ON THE DRAWINGS



Texas Reg. No. F-5712

GFE Project No. 13064



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Drawing Title INFORMATION SHEET ELECTRICAL
Approved: Project Director

VAPAHCS PLANNING AND ENGINEERING

ORMATION SHEET	580-13-403: Renovate 2nd	580-13-403	
ECTRICAL	Floor B-100 for Diagnostic and Therapy Care Line	Building Number B-100	
d: Project Director	Location MEDICAL CENTER HOUSTON TX	Drawing Number	
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Project Title

Office of Construction and Facilities Management



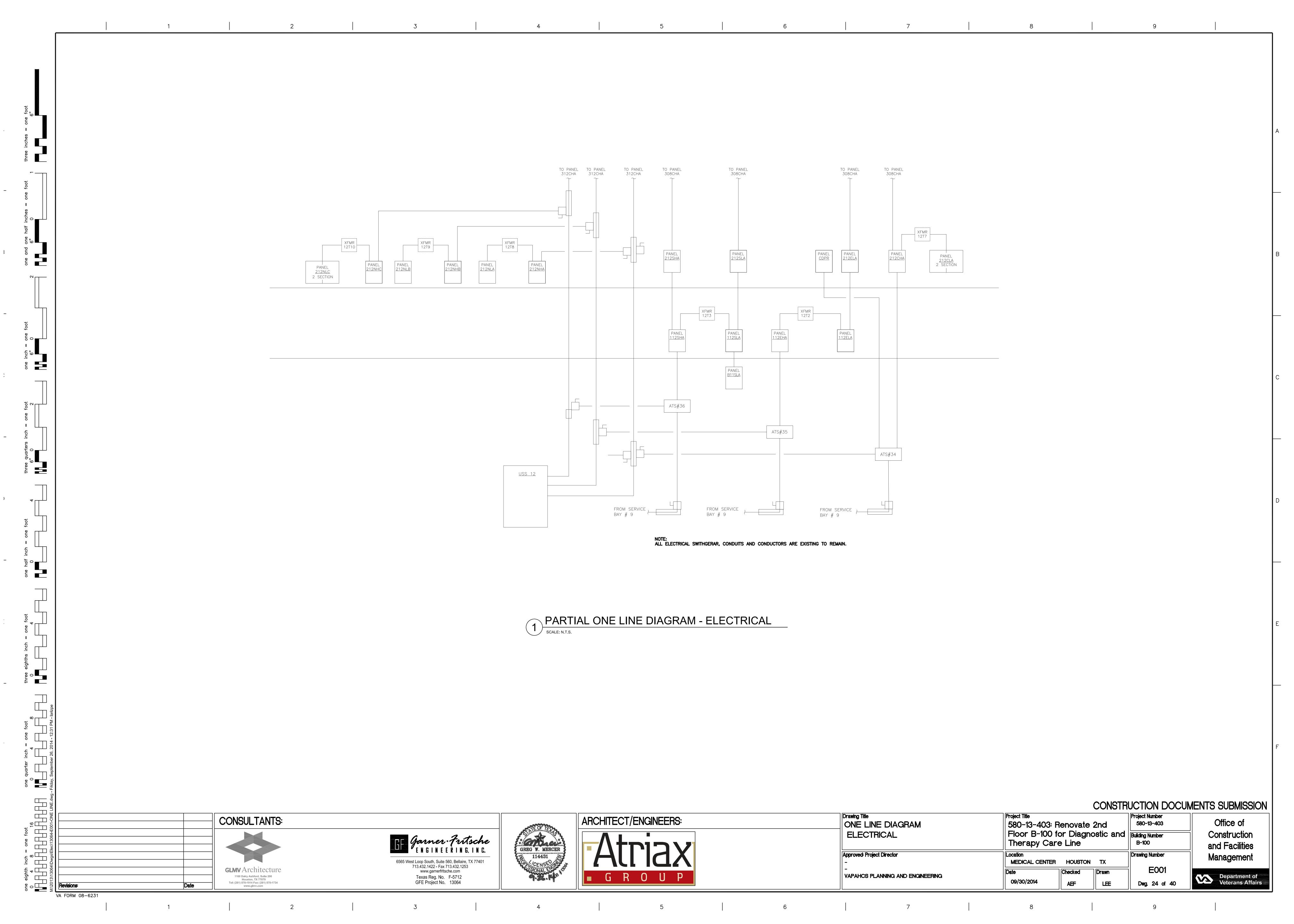
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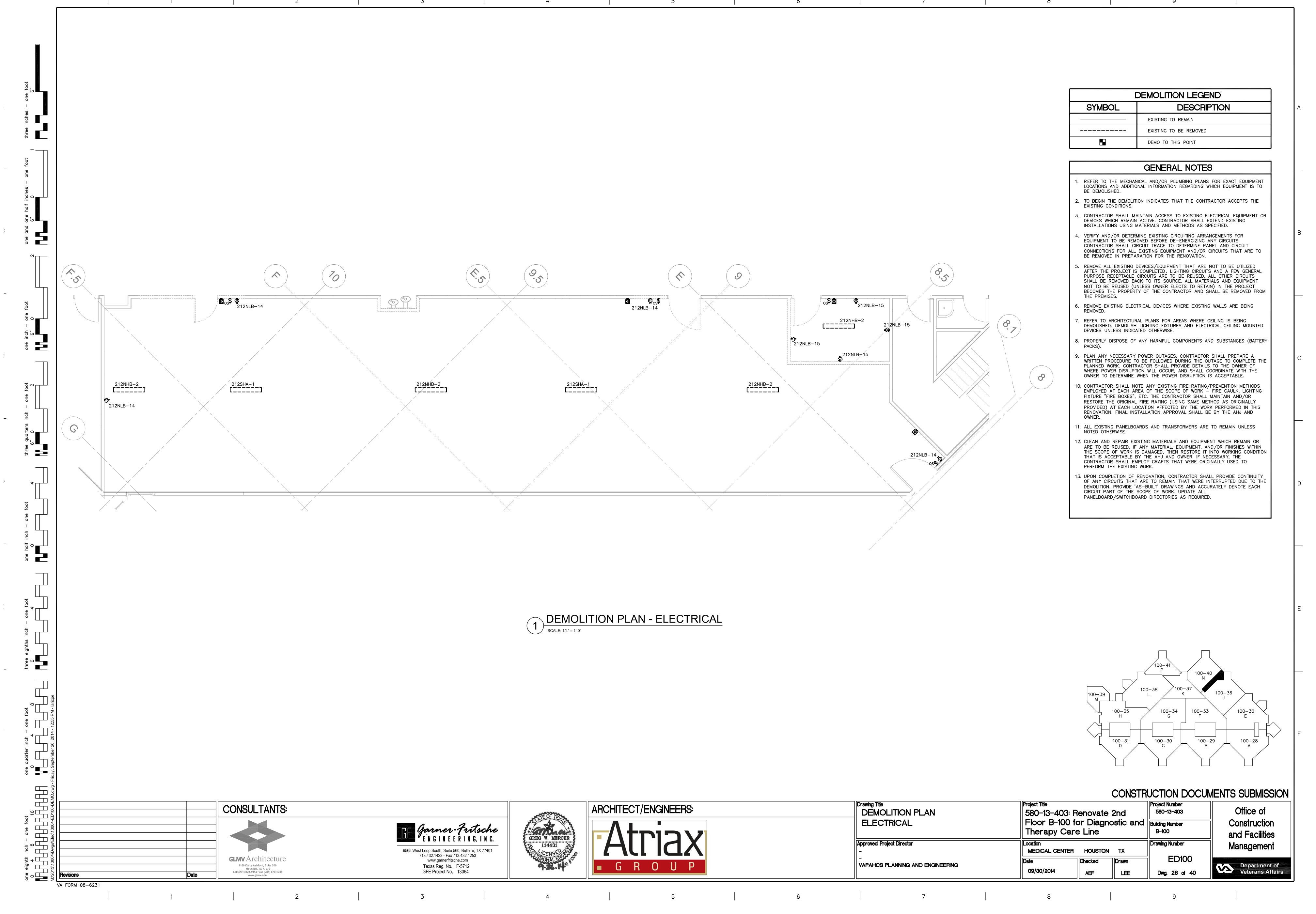
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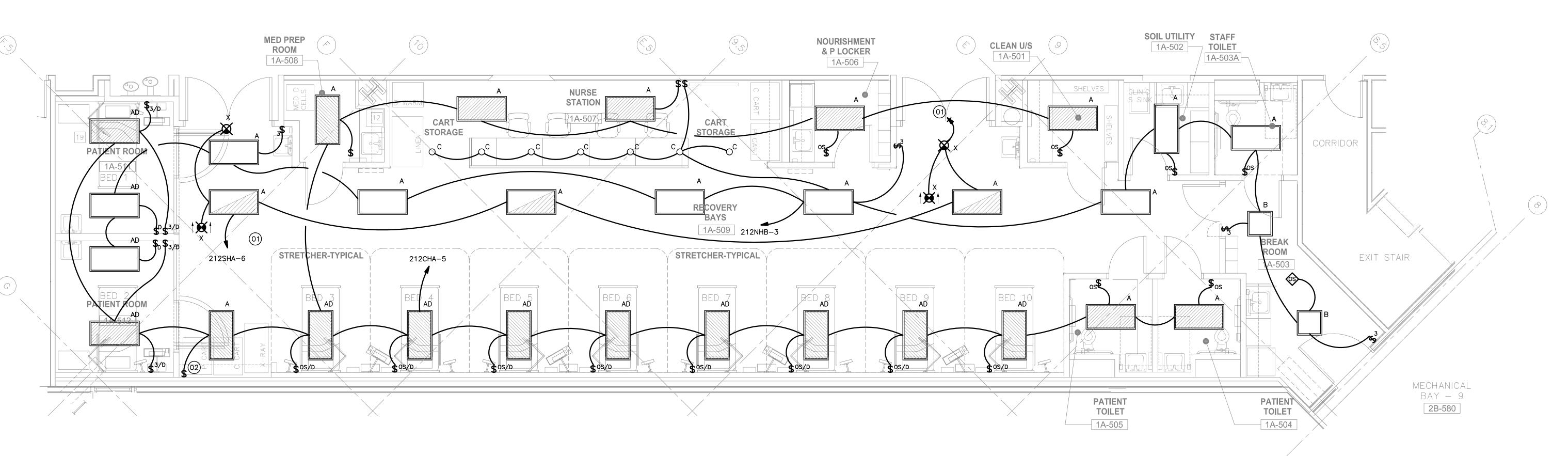
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Veterans Affairs







LIGHTING PLAN - ELECTRICAL

SCALE: 1/4" = 1'-0"

ALTERNATES

REFER TO ARCHITECTURAL PLANS FOR FOR ALTERNATE DEFINITIONS.

SHALL BE SUSPENDED.

ALTERMATE # 1 - PATIENT ROOM 1A-511 TO BE A STORAGE ROOM WITH 1 HOUR RATED CONSTRUCTION AND RATED DOOR FRAME AND HARDWARE. REMOVE ALL ELECTRICAL DEVICES. PROVIDE (2) 1X4 LIGHT FIXTURES FOR GENERAL ILLUMINATION.

ALTERMATE # 2 - IN ADDITION TO ALTERNATE #1, PATIENT ROOM 1A-512 TO BE A STORAGE ROOM WITH 1 HOUR RATED CONSTRUCTION AND RATED DOOR FRAME AND HARDWARE. REMOVE ALL ELECTRICAL DEVICES. PROVIDE (2) 1X4 LIGHT FIXTURES FOR GENERAL ILLUMINATION.

> TOILET 503A TO BE TURNED INTO A STORAGE ROOM. REMOVE ELECTRICAL DEVICES. PROVIDE (1) 1X4 LIGHT FIXTURE FOR GENERAL ILLUMINATION.

ALTERMATE # 3 - IN ADDITION TO ALTERNATE #1 AND #2, REMOVE CEILING AND PROVIDE NO FINISHES TO PATIENT ROOM 1A-511 (TURNED STORAGE ROOM IN ALT #1), PATIENT ROOM 1A-512 (TURNED STORAGE ROOM IN ALT #2), TOILET 503A (TURNED STORAGE ROOM IN ALT #2). LIGHT FIXTURES

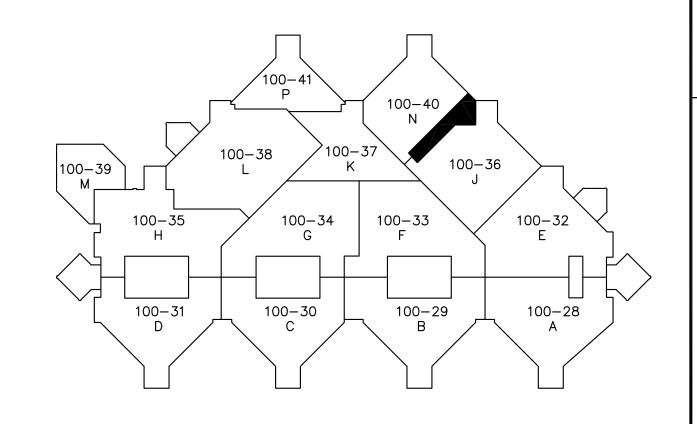
RENOVATION LEGEND				
SYMBOL	DESCRIPTION			
	EXISTING TO REMAIN			
	NEW CONSTRUCTION			

GENERAL NOTES

- REFER TO THE GENERAL NOTES ON THE INFORMATION SHEET FOR ADDITIONAL INFORMATION.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION, MOUNTING HEIGHT, AND ROTATION OF ALL LIGHTING FIXTURES. REFER TO THE ARCHITECTURAL PLANS FOR CEILING TYPES; COORDINATE ALL FIXTURE TYPES AND APPROPRIATE MOUNTING HARDWARE PRIOR TO PURCHASING.
- ALL LIGHTING CIRCUITS ARE EXISTING TO REMAIN UNLESS INDICATE OTHERWISE. EXTENDED AND CONNECT THE EXISTING LIGHTING CIRCUIT AS NEEDED TO A THE NEW LIGHT FIXTURES. IF A NEW LIGHTING FIXTURE DOES NOT REPLACE AN EXISTING FIXTURE, THEN EXTEND A LIGHTING CIRCUIT (AND A CONSTANT UNSWITCHED CONDUCTOR IF NEEDED) FROM THE NEAREST FIXTURE IN THE VICINITY; CONFIRM THAT THE LIGHTING CIRCUIT (INCLUDING THE ADDITION OF THE FIXTURE) DOES NOT EXCEED 16 AMPS.
- 4. RAISE, OFFSET, AND LOWER CONDUCTORS AND CONDUIT AS
- 5. PROVIDE NEW OCCUPANCY SENSORS. THE OCCUPANCY SENSOR LOCATIONS AND QUANTITIES ARE DIAGRAMMATIC ONLY AND ARE SHOWN FOR GENERAL INTENT AND PRICING ONLY. EXACT SENSOR LOCATION AND PLACEMENT IS TO BE PER THE SELECTED MANUFACTURER LAYOUT. SENSORS ARE TO BE POSITIONED AND AIMED IN SUCH A WAY THAT SENSORS ONLY RESPONDS TO MOTION IN THE ROOM CONTAINING THE SENSORS. INSTALL SENSORS A SAFE DISTANCE AWAY FROM HVAC SUPPLY AND RETURN GRILLES IN ORDER TO AVOID FALSE ACTIVATION; EXACT MOUNTING DISTANCES SHALL BE PER SENSOR MANUFACTURER. WALL-MOUNTED OR CEILING-MOUNTED SENSORS SHALL BE SUITABLE FOR THE ENVIRONMENT IN WHICH THEY ARE PLACED IN. OCCUPANCY SENSORS ARE TO BE SUPPLIED FROM THE SAME POWER SOURCE THE LIGHTING FIXTURES ARE CONNECTED TO. ALL SENSORS SHALL HAVE NORMALLY CLOSED CONTACTS AND ALLOW CURRENT TO POWER THE LIGHTING FIXTURES IN THE EVENT OF A SENSOR FAILURE. PROVIDE ALL SENSOR POWER PACKS, HARDWARE, AND CIRCUITS AS NEEDED.

KEYED NOTES

(01) FIXTURES SHALL BE CONNECTED TO NON-SWITCHED LIFE SAFETY CIRCUIT 02) COORDINATE EXACT LOCATION OF SWITCH WITH USER PRIOR TO INSTALLATION.



CONSTRUCTION DOCUMENTS SUBMISSION

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Drawing Title LIGHTING PLAN ELECTRICAL
Approved: Project Director

VAPAHCS PLANNING AND ENGINEERING

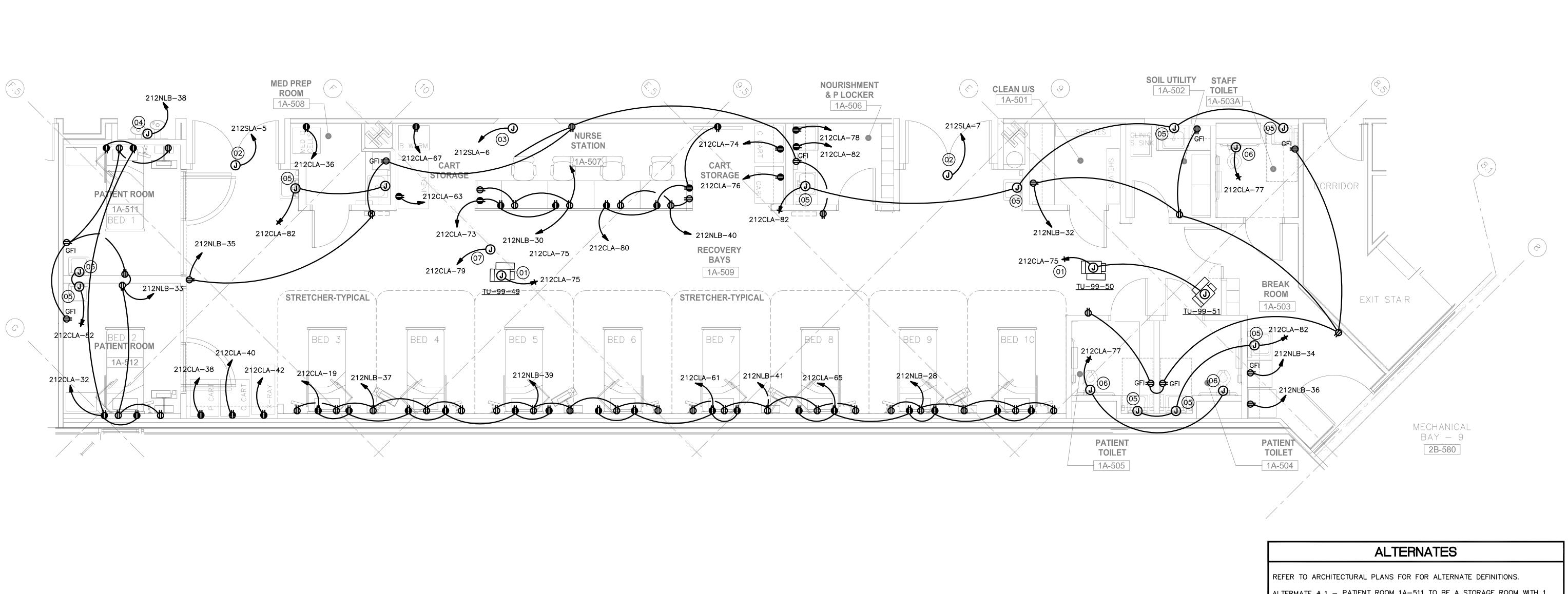
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Project Number 580-13-403: Renovate 2nd Floor B-100 for Diagnostic and **Building Number** Therapy Care Line Drawing Number MEDICAL CENTER HOUSTON TX

Checked

09/30/2014

Office of Construction and Facilities Management



RENOVATION LEGEND DESCRIPTION SYMBOL EXISTING TO REMAIN NEW CONSTRUCTION

GENERAL NOTES

- REFER TO THE GENERAL NOTES ON THE INFORMATION SHEET FOR ADDITIONAL INFORMATION.
- 2. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 3. REFER TO THE MECHANICAL AND/OR PLUMBING PLANS FOR EXACT EQUIPMENT LOCATIONS.
- 4. ALL PANELBOARDS ARE EXISTING TO REMAIN UNLESS INDICATED
- . PROVIDE PERMANENT AFFIXED CIRCUIT NUMBERS ON ALL ELECTRICAL
- RECEPTACLES THAT ARE PART OF THE SCOPE OF WORK UNLESS NOTED OTHERWISE. RECEPTACLE/OUTLET HEIGHTS AND ORIENTATION ARE NOT INTENDED
- TO BE SHOWN ON THESE PLANS, REFER TO ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR ALL RECEPTACLE/OUTLET HEIGHTS AND ORIENTATION PRIOR TO INSTALLATION. THE ARCHITECTURAL DRAWINGS AND OWNER SPECIFICATIONS SHALL SUPERSEDE ANY HEIGHT DIMENSIONS THAT ARE SHOWN ON THESE PLANS.
- WATER SOURCE (PIPE, HOSE, ETC.) SHALL BE GFCI AND COMPLY 11. PROVIDE TAMPER RESISTANCE RECEPTACLES IN ALL PSYCHIATRIC,
- PEDIATRIC, AND PATIENT CARE AREAS. 12. ALL RECEPTACLES IN PATIENT CARE AREAS SHALL BE HOSPITAL

10. ALL RECEPTACLES WITHIN 6FT OF THE OUTSIDE EDGE OF A SINK OR

GRADE. ONLY SIMPLEX GROUNDING OR DUPLEX GROUNDING DEVICES SHALL BE INSTALLED UNLESS NOTED OTHERWISE. 13. BRANCH CIRCUITS IN PATIENT CARE AREAS SHALL HAVE REDUNDANT

GROUND SYSTEMS IN COMPLIANCE WITH THE NATIONAL ELECTRICAL

CODE. PROVIDE A COPPER GROUND CONDUCTOR IN ALL BRANCH

- CIRCUIT CONDUITS. 14. IN AREAS USED FOR PATIENT CARE, THE GROUNDING TERMINALS FOR ALL RECEPTACLES AND ALL NON-CURRENT CARRYING CONDUCTIVE SURFACES OPERATING AT OVER 100 VOLTS SHALL BE GROUNDED BY AN INSULATED COPPER CONDUCTOR. REFER TO NEC 517.3 FOR
- ADDITIONAL INFORMATION. 15. COORDINATE THE LOCATION, MOUNTING HEIGHT, AND ORIENTATION OF ALL ELECTRICAL DEVICES AND OUTLETS WITH ALL OTHER TRADES PRIOR TO ROUGH—IN AND/OR INSTALLATION.
- 16. REFER TO THE MECHANICAL DRAWINGS TO VERIFY EQUIPMENT REQUIRING SINGLE POINT CONNECTION. IF SINGLE POINT CONNECTION IS PRESENT, CONFIRM EXACT LOCATION OF CONNECTION WITH MANUFACTURER.
- 17. CONTRACTOR SHALL EXTEND ELECTRICAL WIREWAY IN INTERSTITIAL SPACE TO ABOVE CONSTRUCTION AREA AS REQUIRED.

ALTERMATE # 1 - PATIENT ROOM 1A-511 TO BE A STORAGE ROOM WITH 1 HOUR RATED CONSTRUCTION AND RATED DOOR FRAME AND HARDWARE. REMOVE ALL ELECTRICAL DEVICES. PROVIDE 1 RECEPTACLE FOR GENERAL USE CONNECTED TO AVAILABLE 20A-120V RECEPTACLE CIRCUIT FROM PANEL 212NLB.

ALTERMATE # 2 - IN ADDITION TO ALTERNATE #1, PATIENT ROOM 1A-512 TO BE A STORAGE ROOM WITH 1 HOUR RATED CONSTRUCTION AND RATED DOOR FRAME AND HARDWARE. PROVIDE 1 RECEPTACLE FOR GENERAL USE CONNECTED TO AVAILABLE

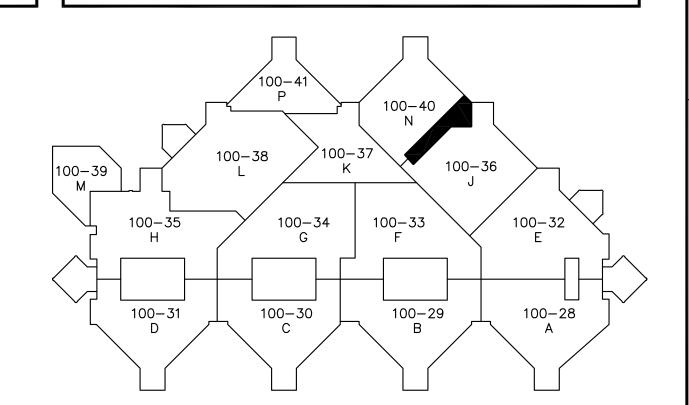
> TOILET 503A TO BE TURNED INTO A STORAGE ROOM. REMOVE ELECTRICAL DEVICES. PROVIDE 1 RECEPTACLE FOR GENERAL USE CONNECTED TO AVAILABLE 20A-120V RECEPTACLE

CIRCUIT FROM PANEL 212NLB ALTERMATE # 3 — IN ADDITION TO ALTERNATE #1 AND #2, REMOVE CEILING AND PROVIDE NO FINISHES TO PATIENT ROOM 1A-511 (TURNED STORAGE ROOM IN ALT #1), PATIENT ROOM 1A-512 (TURNED STORAGE ROOM IN ALT #2), TOILET 503A (TURNED STORAGE ROOM IN ALT #2).

20A-120V RECEPTACLE CIRCUIT FROM PANEL 212NLB.

KEYED NOTES

- (01) POWER FOR TERMINAL UNIT CONTROLS. PROVIDE ALL REQUIRED ELECTRICAL CONNECTIONS. COORDINATE WITH MECHANICAL DRAWINGS FOR EXACT LOCATION.
- (02) POWER FOR DOOR HARDWARE (PUSH BUTTONS, DOOR RELEASE, DOOR HOLDER, CARD READER, ETC). PROVIDE ALL REQUIRED ELECTRICAL
- CONNECTIONS. (03) POWER FOR MEDGAS ALARM PANEL. PROVIDE ALL REQUIRED ELECTRICAL
- CONNECTIONS. COORDINATE WITH MEDGAS DRAWINGS FOR EXACT LOCATION. (04) POWER FOR DRINKING FOUNTAIN. PROVIDE ALL REQUIRED ELECTRICAL
- CONNECTIONS.
- (05) POWER FOR FAUCET SENSORS. PROVIDE ALL REQUIRED ELECTRICAL CONNECTIONS.
- (06) POWER FOR FLUSH SENSORS. PROVIDE ALL REQUIRED ELECTRICAL CONNECTIONS.
- 07) POWER FOR CAMERA POWER SUPPLY. PROVIDE ALL REQUIRED ELECTRICAL CONNECTIONS.



CONSTRUCTION DOCUMENTS SUBMISSION Project Number

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POWER PLAN - ELECTRICAL

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Drawing Title
POWER PLAN ELECTRICAL

VAPAHCS PLANNING AND ENGINEERING

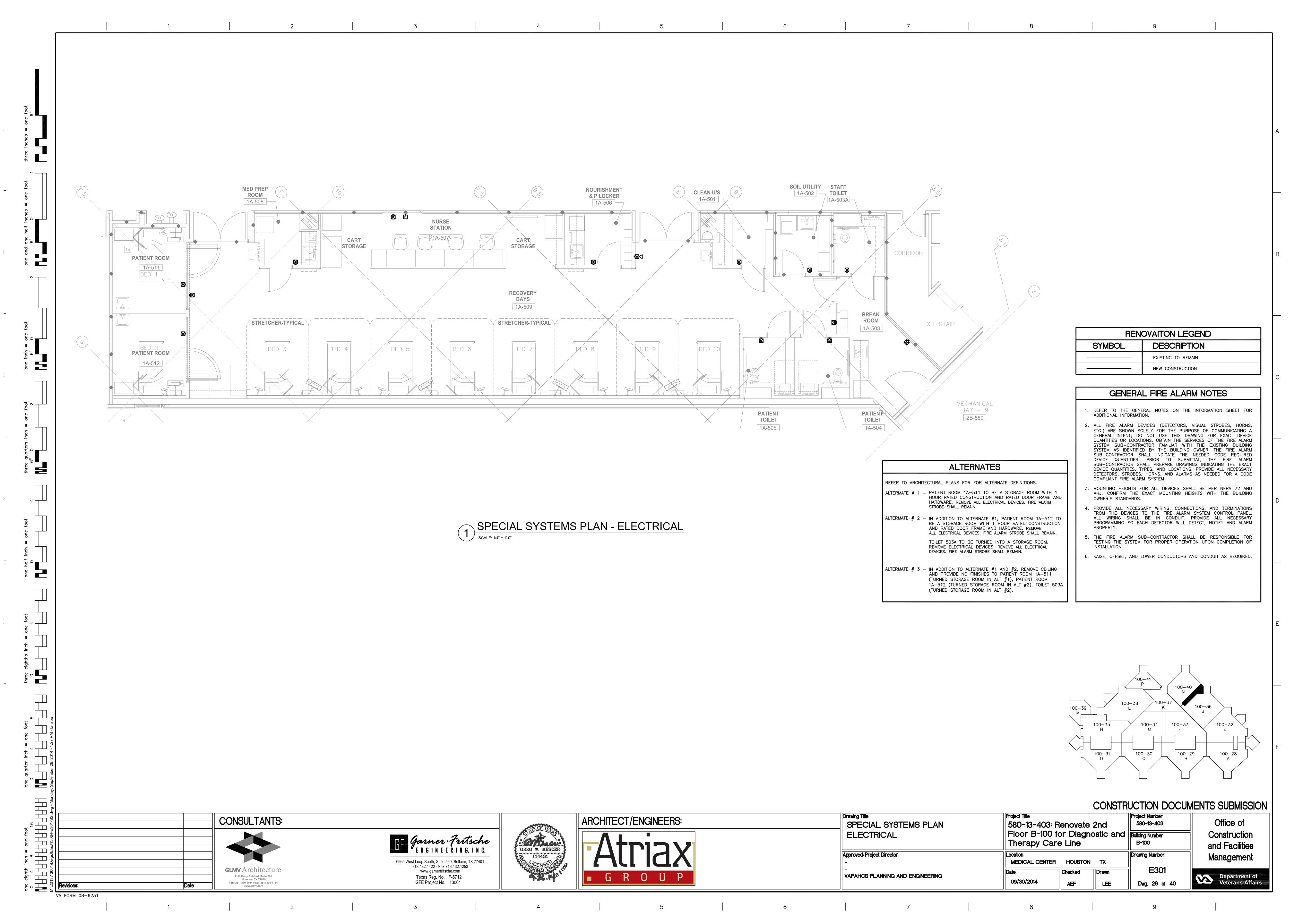
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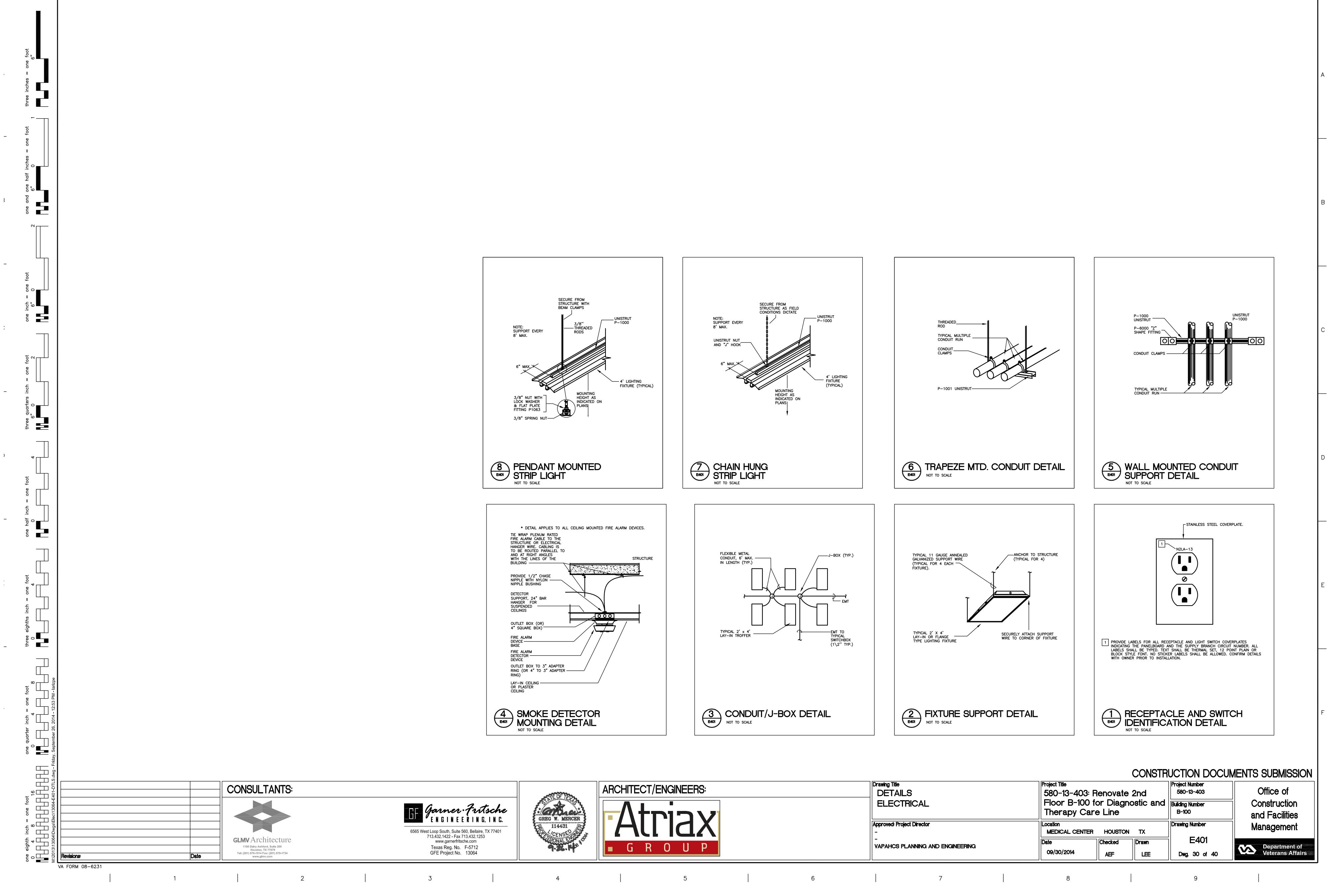
580-13-403: Renovate 2nd Floor B-100 for Diagnostic and Therapy Care Line MEDICAL CENTER HOUSTON TX Checked

09/30/2014

Office of 580-13-403 Construction **Building Number** and Facilities Drawing Number Management







	PLUMBING FIXTURE SCHEDULE								
ID	ITEM	MANUFACTURER/ MODEL NO.	FIXTURE SERVICE	REMARKS					
⟨WC-1⟩	WATER CLOSET WALL MOUNTED SENSOR OPERATED FLUSH VALVE BARRIER FREE	AMERICAN STANDARD MODEL NO. 3351.001 'AFWALL' WALL MOUNTED VITREOUS CHINA WATER CLOSET, 1.28 GPM, WITH RIM AT 17 1 /2" A.F.F. FLUSH VALVE: SLOAN MODEL 111-1.28 ES-S TMO 'OPTIMA' SENSOR FLUSH VALVE CONTROL. JR SMITH CARRIER	1" CW 4" WASTE 2" VENT	RE: ARCHITECTURAL DRAWINGS FOR EXACT LOCATION. RE: MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE SLOAN EL-154 TRANSFORMER MOUNTED IN J-BOX ABOVE CEILING FOR UP TO 10 FLUSH VALVES. RE: ELECTRICAL DWGS FOR POWER					
(LAV-1)	LAVATORY WALL MOUNTED SENSOR FAUCET GOOSENECK SPOUT BARRIER-FREE	AMERICAN STANDARD MODEL NO. 0356.015 LUCERNE LAVATORY, 8" CENTERS. FURNISH W/JAY R. SMITH #0710 FLOOR—MOUNTED LAVATORY SUPPORT W/CONCEALED ARMS. FAUCET: AMERICAN STANDARD EAF—700—ISM DUAL INFRA—RED GOOSENECK WITH INTEGRAL SPOUT TEMPERATURE MIXER. TRIM: MCGUIRE #155WC GRID DRAIN W/1 1/4" TAILPIECE, OFFSET FOR WHEELCHAIR USE, #8872 — 1 1/4" P—TRAP, #H—2165 SUPPLY STOPS.	1/2" CW 1/2" HW 2" WASTE 2" VENT	RIGID MTD 5 1/4" GOOSENECK SPOUT W/INTEGRAL 2.2 GPM LAMINAR FLOW SPOUTL; PRE-FABRICATED INSULATION ON WATER LINES AND P-TRAP: BROCAR PRODUCTS, INC., TRAP WRAP TRUE BRO, INC., HANDI LAV GUARD, MCGUIRE PRO-WRAP. REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING HEIGHT. PROVIDE SLOAN EL-154 TRANSFORMER MOUNTED IN J-BOX ABOVE CEILING FOR UP TO 3 FAUCETS. RE: ELECTRICAL DWGS FOR POWER					
⟨SK-1⟩	SINGLE COMPARTMENT SINK GOOSENECK SPOUT WRISTBLADE HANDLES BARRIER FREE	ELKAY MODEL LRAD1918, 18 GAUGE STAINLESS STEEL SELF-RIMMING SINK, REAR-CENTER DRAIN, 6" DEEP. FAUCET: AMERICAN STANDARD EAF-700-ISM DUAL INFRA-RED GOOSENECK WITH INTEGRAL SPOUT TEMPERATURE MIXER. TRIM: MCGUIRE NO. 151A DRAIN WITH 1 1/2" TAILPIECE, #1151AWC, WITH OFFSET #8089 P-TRAP, #H-2165 SUPPLY STOPS.	1/2" CW 1/2" HW 2" WASTE 2" VENT	SINGLE COMPARTMENT SINK 18"X19"X6"DEEP. RIGID MTD 5 3/8" GOOSENECK SPOUT W/INTEGRAL 1.5 GPM LAMINAR FLOW CONTROL. PRE-FABRICATED INSULATION ON WATER LINES AND P-TRAP: BROCAR PRODUCTS, INC., TRAP WRAP TRUE BRO, INC., HANDI LAV GUARD, MCGUIRE PRO-WRAP. PROVIDE SLOAN EL-154 TRANSFORMER MOUNTED IN J-BOX ABOVE CEILING FOR UP TO 3 FAUCETS. RE: ELECTRICAL DWGS FOR POWER					
(EDF-1)	BI-LEVEL DRINKING FOUNTAIN BARRIER FREE	HALSEY-TAYLOR OVL-2 BARRIER-FREE, BI-LEVEL STAINLESS STEEL DRINKING FOUNTAIN. CARRIER: J.R. SMITH FLOOR MOUNTED FOUNTAIN CARRIER.	1/2" CW 2" WASTE 2" VENT	STAINLESS STEEL, ELECTRIC WATER COOLER, COOLING CAPACITY TO BE 8.0 GALLONS PER HOUR FROM 80 DEGREE F. INLET WATER TEMPERATURE TO 50 DEGREE F. OUTLET WATER TEMPERATURE IN 90 DEGREE F. AMBIENT, 1/5 H.P,,115 VOLT 60 HZ.					
(CS-1)	CLINICAL SINK WALL MOUNTED FLUSH VALVE PEDAL VALVES BEDPAN WASHER	AMERICAN STANDARD CLINIC SERVICE SINK MODEL NO. 9512.999.020 WITH CAST METAL LOOSE STRAINER, FURNISH W/SLOAN ROYAL #117BH FLUSH VALVE; CHICAGO FAUCET #814 WITH FORK BRACE AND STOPS, 6" WRISTBLADE CONTROL HANDLES, #910G-777-19K BEDPAN WASHER, SELF CLOSING, DOUBLE PEDAL VALVE, MOUNTING HOOK, EXTENDED HOSE, AND ELEVATED VACUUM BREAKER. J.R. SMITH CARRIER.	1" CW 3/4" HW 4" WASTE 2" VENT	MOUNT VACUUM BREAKER 7'-6" AFF. PROVIDE (3) OPTIONAL AMERICAN STANDARD 7832512.075 RIM GUARDS.					
⟨RVB−1⟩	RECESSED VALVE BOX	GUY GRAY MODEL NO. BIM875, 18 GAUGE STEEL BOX AND COVER. 1/4" COMPRESSION OUTLET, QUARTER TURN VALVE.	1/2" CW	RE: ARCHITECTURAL DRAWINGS FOR EXACT LOCATION. WHEN INSTALLED WITHIN CASEWORK, PROVIDE RUBBER GROMMET THRU COUNTER AT EACH PIECE OF EQUIPMENT.					

PIPING MATERIALS SCHEDULE				
PLUMBING SYSTEM	PLUMBING MATERIAL DESCRIPTION			
SANITARY DRAIN PIPING	STANDARD WEIGHT CAST IRON PIPE, W/ NO-HUB JOINTS			
VENT PIPING	STANDARD WEIGHT CAST IRON PIPE, W/ NO-HUB JOINTS			
DOMESTIC WATER PIPING	TYPE 'L' COPPER TUBING, W/ WROUGHT COPPER FITTINGS			
MEDICAL GAS PIPING	ASTM B819 TYPE 'K' COPPER TUBING, W/ BRAZED WROUGHT COPPER FITTINGS			
FIRE PROTECTION PIPING	SCHEDULE 40 BLACK STEEL PIPE ,W/ CAST IRON FITTINGS			

	MED GAS ZONE EQUIPMENT SCHEDULE							
SYMBOL	DESCRIPTION	EQUIPPED WITH	LOCATION (*)					
⟨ZVB−3⟩	RECESSED ZONE VALVE BOX	O2, A, VAC	CORRIDOR					
⟨MGO−1⟩	RECESSED QUICK-CONNECT	2-02, 1-A, 3-VAC, 3-SLIDE	PER PLANS					
(AAP-3)	AREA ALARM PANEL	3 - SIGNAL	NURSE STATION					

(*) CONTRACTOR SHALL CLOSELY COORDINATE INSTALLATION OF ZONE VALVE BOXES, ALARMS, AND MED GAS OUTLETS AS REQUIRED TO ACCOMMODATE FINISHED APPEARANCE, MOUNTING HEIGHT AND ARRANGEMENT PER ARCHITECTURAL DRAWINGS.

SHOCK ARRESTOR SCHEDULE FIXTURE SIZE MODEL NUMBER SC-500 3/4" NPT 12-32 SC-750 33-60 1" NPT SC-1000 61-113 1 1/4" NPT SC-1250 1 1/2" NPT 114-154 SC-1500 155-330 2"NPT SC-2000

1. ALL FIXTURE WATER SUPPLIES SHALL BE INSTALLED WITH APPROPRIATELY SIZED ARRESTORS IN COMPLIANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS.

PLUMBING DEMOLITION NOTES

- CONTRACTOR SHALL REMOVE EXISTING SERVICES SUCH AS WATER, WASTE & VENT PIPING SERVING FIXTURES AND/OR CONNECTIONS TO EQUIPMENT WHICH ARE SHOWN ON THE DRAWINGS TO BE REMOVED OR RELOCATED. PERMANENTLY SEAL AND CAP SERVICES NEXT TO MAIN SERVICE LINES ABOVE CEILINGS, IN WALLS, OR BELOW FLOORS UNLESS NOTED OTHERWISE. EXISTING PLUMBING FIXTURES AND RELATED ITEMS WHICH ARE TO BE REMOVED SHALL BE SUBMITTED TO THE OWNER. ITEMS THE OWNER WISHES TO RETAIN SHALL BE DELIVERED TO STORAGE WHERE DIRECTED BY OWNER. ITEMS THE OWNER DOES NOT WISH TO REMAIN SHALL BE LEGALLY DISPOSED OF.
- TEMPORARY SHUTDOWN OF EQUIPMENT AND SERVICES THAT ARE ASSOCIATED WITH THIS SCOPE OF OF WORK SHALL BE COORDINATED WITH THE OWNER PRIOR TO THE SHUTDOWN. PROVIDE OWNER WITH ESTIMATED DURATION OF SHUT DOWN.
- CONTRACTOR SHALL ENSURE NO DOMESTIC COLD AND/OR HOT WATER DEAD LEGS EXIST WITHIN SCOPE OF PLUMBING DEMOLITION.
- EXISTING FIXTURES, EQUIPMENT, SERVICES, AND CONNECTIONS SHALL BE VERIFIED FOR EXACT LOCATIONS AND SIZE. IF DEVIATIONS ARE FOUND, CONTRACTOR SHALL BRING THEM TO THE ARCHITECT'S ATTENTION FOR COORDINATION.
- EXISTING FIXTURES, EQUIPMENT, SERVICES, AND CONNECTIONS WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REWORKED OR REPLACED AS REQUIRED TO PROVIDE ORIGINAL OPERATION.
- PENETRATIONS THROUGH EXISTING PARTITIONS AND FLOORS SHALL BE SLEEVED AND SEALED TO MAINTAIN RATING OF EXISTING PARTITION AND FLOOR RATING.
- EXISTING PLUMBING SERVICES NOT SHOWN ON DRAWINGS SHALL REMAIN AS IS UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL COORDINATE THE INTERRUPTION OF EXISTING SERVICES WITH THE OWNER PRIOR TO START OF DEMOLITION WORK.

PLUMBING GENERAL NOTES

- 1. OBTAIN ALL NECESSARY PERMITS, AND COMPLY WITH ALL NATIONAL, STATE AND MUNICIPAL LAWS, CODES AND ORDINANCES RELATING TO BUILDING AND
- 2. PROTECT EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING AND INSTALLATION UNTIL COMPLETION OF CONSTRUCTION.
- 3. REMOVE ALL EXCESS MATERIAL AND DEBRIS AND CLEAN ALL EQUIPMENT UPON COMPLETION OF WORK. TOUCH UP WITH PAINT WHERE REQUIRED.
- 4. ALL SYSTEMS SHALL BE COMPLETE AND WORKING AT COMPLETION OF CONSTRUCTION.
- 5. CONTRACTOR SHALL VISIT JOB SITE AND VERIFY SIZE AND LOCATION OF ALL EXISTING ITEMS AND CONDITIONS.

6. ALL CONNECTIONS BETWEEN PIPES OF DISSIMILAR MATERIALS SHALL BE MADE WITH

- DIELECTRIC UNIONS. PROVIDE ACCESS PANELS WHERE REQUIRED. 7. COORDINATE WATER, WASTE, AND VENT PIPING WITH OTHER TRADES TO AVOID SPACING
- AND/OR ROUTING CONFLICTS. 8. CONTRACTOR SHALL COORDINATE ALL WORK CLOSELY WITH EXISTING AND NEW MECHANICAL AND ELECTRICAL ITEMS.
- 9. SUBMIT SHOP DRAWINGS OF PROPOSED NEW DEVICES PRIOR TO INSTALLATION.
- 10. FIXTURES, EQUIPMENT AND CONNECTIONS, AND PIPING SHALL BE FURNISHED AND INSTALLED TO MEET OR EXCEED STATE AND LOCAL CODES AND REQUIREMENTS.
- 11. FURNISH AND INSTALL SHOCK ARRESTORS IN COLD WATER LINES AT CONNECTIONS TO FLUSH VALVES AND QUICK CLOSING VALVES AND AT ALL HOT AND COLD WATER CONNECTIONS TO FIXTURES.
- 12. DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT ROUTING OF ALL SERVICES WITH EXISTING CONDITIONS AND WITH ALL OTHER TRADES.
- 13. ALL PROPOSED SAWCUT LOCATIONS THROUGH EXISTING FLOOR SLAB ARE TO BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR TO SAWCUTTING. SAWCUTTING PROCEDURES, METHODS, AND SCOPE SHALL NOT CONFLICT WITH PROJECT SPECIFICATIONS AND/OR CODE DRIVEN EXCAVATION OR BACKFILL REQUIREMENTS ASSOCIATED WITH UNDERGROUND PIPE INSTALLATION.
- 14. CONTRACTOR SHALL NOTIFY OWNER OF ANY REQUIRED SHUT DOWNS AND COORDINATE THESE WITH OWNER. DOWNTIME SHALL BE HELD TO A MINIMUM.

FIRE PROTECTION NOTES

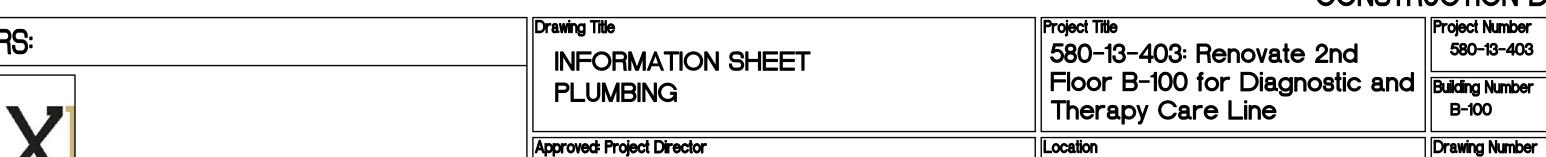
- 1. THE SPRINKLER CONTRACTOR SHALL MODIFY THE EXISTING AUTOMATIC SPRINKLER SYSTEM INFRASTRUCTURE FOR THE RENOVATION TO FULLY SPRINKLE THE ENTIRE PROJECT SCOPE. CONTRACTOR SHALL CONFIRM SPRINKLER HEAD STYLES WITH OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH VAMC BUILDING STANDARDS, NFPA 13, AND ALL AUTHORITIES HAVING JURISDICTION.
- 2. THE ENTIRE RENOVATION AND ADDITITION SHALL BE FURNISHED WITH A 100% HYDRAULICALLY CALCULATED AUTOMATIC WET PIPE SPRINKLER SYSTEM. SYSTEM(S) SHALL BE HYDRAULICALLY CALCULATED UTILIZING DESIGN DENSITIES AND REMOTE AREA AS RECOMMENDED BY NFPA. ALL SPRINKLER HEADS SHALL BE FULLY CONCEALED, QUICK RESPONSE TYPE.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BE FM APPROVED AND UL LISTED.
- 4. SPRINKLER SHOP DRAWINGS AND HYDRAULIC CALCULATIONS PREPARED BY A LICENSED SPRINKLER CONTRACTOR SHALL BE SUBMITTED TO THE OWNER, ARCHITECT, OWNERS INSURING AGENCY, AND ALL REQUIRED AUTHORITIES HAVING JURISDICTION FOR REVIEW AND APPROVAL. SUBMITTED SHOP DRAWINGS AND CALCULATIONS SHALL BEAR THE APPROVAL STAMP OF ALL REQUIRED REVIEWING AUTHORITIES.
- 5. COORDINATE NEW AND EXISTING SPRINKLER PIPING WITH NEW INSTALLATION OF DUCTWORK, CEILINGS, LIGHT FIXTURES, AND ALL OTHER TRADES. THIS INCLUDES ALL MAINS AND BRANCH PIPING.
- 6. VISIT JOB SITE PRIOR TO SUBMISSION OF BID TO DETERMINE ALL EXISTING CONDITIONS AND HOW THEY WILL RELATE WITH THE NEW CONSTRUCTION.

D	- DRAIN PIPING		
DSP			
F			
PA	- PRE-ACTION SPRINKLER PIPE		
P			
PSS—			
PSD-			
SP			
w			
w	- SANITARY SEWER BELOW SLAB		
SV	- SANITARY VENT		
	- COLD WATER		
	- HOT WATER		
	- HOT WATER RETURN		
SW	- SOFTENED WATER		
>	- DIRECTION OF FLOW		
	- DIRECTION OF SLOPE DOWN		
	DROP IN PIPE		
ю	RISE IN PIPE		
₩	- GATE VALVE		
—————————————————————————————————————	- BALL VALVE		
	CHECK VALVE		
Д	SUPERVISED VALVE WITH FLOW SWITCH		
	PLUG VALVE / GAS COCK		
	- BUTTERFLY VALVE		
	- BALANCING VALVE		
	- PIPE UNION		
	- PRESSURE CONTROL VALVE		
<u> </u>	- 3-WAY VALVE		
	- SOLENOID VALVE		
F5	FLOW SWITCH		
	PRESSURE GAUGE WITH GAUGE COCK		
1'	THERMOMETER		
	FLOOR DRAIN		
	T & P RELIEF VALVE		
<u>'</u>			
. >.	STRAINER		
CO I	- END OF LINE CLEANOUT		
FCO Ø	- FLOOR CLEANOUT		
wco I	- WALL CLEANOUT		
	CAP		

PLUMBING SYMBOLS

DRAWING INDEX					
NUMBER	DRAWING TITLE				
P000	INFORMATION SHEET — PLUMBING				
PD100	DEMOLITION PLAN — PLUMBING				
PD101	DEMOLITION INTERSTITIAL PLAN — PLUMBING				
P200	INTERSTITIAL 1st FLOOR PLAN - PLUMBING				
P201	FLOOR PLAN - PLUMBING				
P301	FLOOR PLANS - MED GAS AND FIRE PROTECTION				
P401	DETAILS — PLUMBING				

CONSTRUCTION DOCUMENTS SUBMISSION



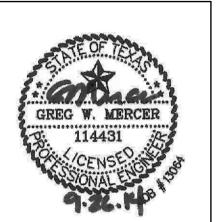
B-100 Drawing Number MEDICAL CENTER HOUSTON TX Checked VAPAHCS PLANNING AND ENGINEERING

Management

Department of Veterans Affairs

		CONSULTANTS:	
			GE Garner-Fritsche ENGINEERING, INC.
		GLMV Architecture	6565 West Loop South, Suite 560, Bellaire, TX 77401 713.432.1422 - Fax 713.432.1253 www.garnerfritsche.com
Revisions:	Date	1160 Dalry Ashford, Sulte 200 Houston, TX 77079 Tel: (281) 870-1914 Fax: (281) 870-1734 www.glmv.com	Texas Reg. No. F-5712 GFE Project No. 13064

VA FORM 08-6231



ARCHITECT/ENGINEERS:

09/30/2014

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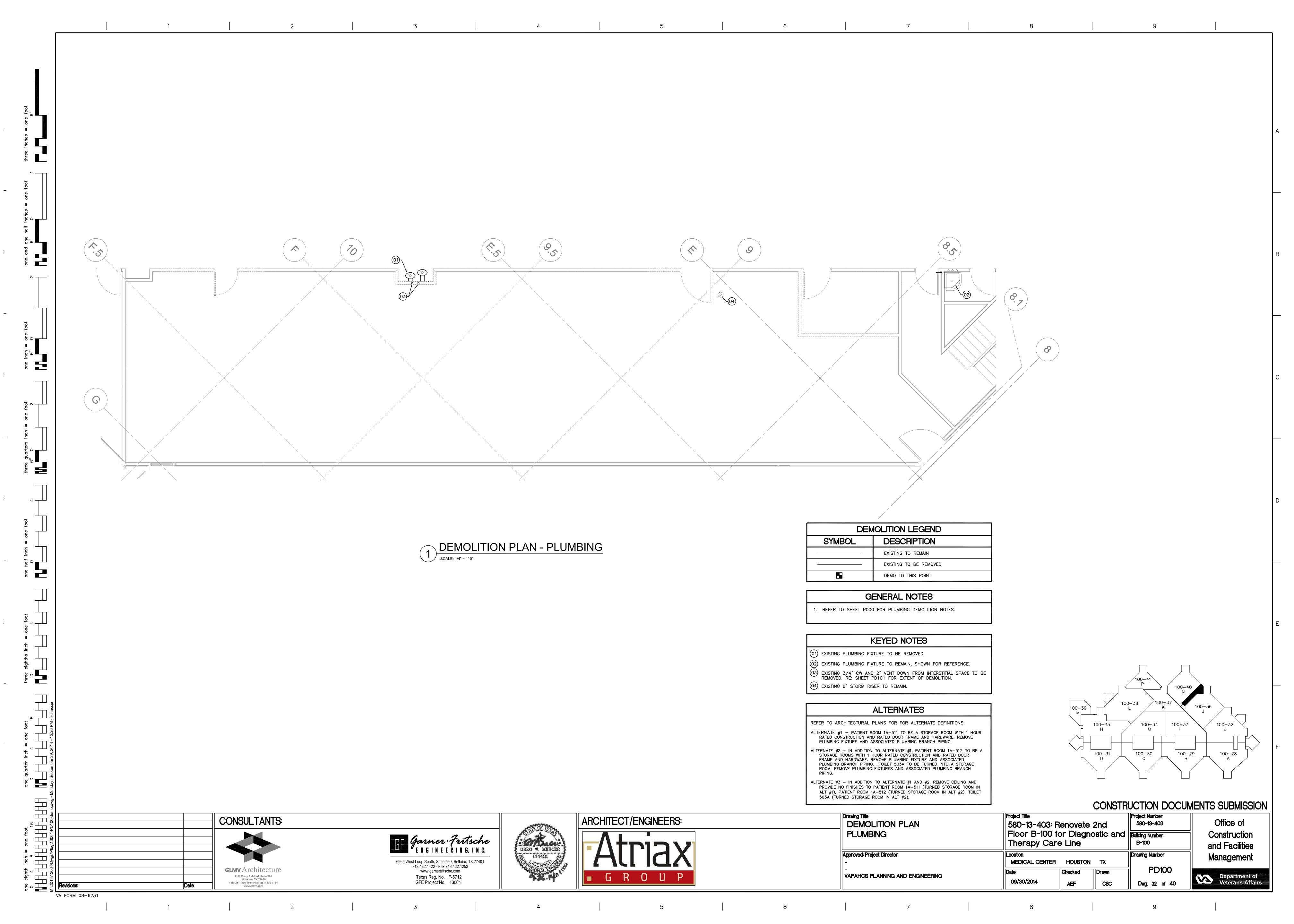
Project Number

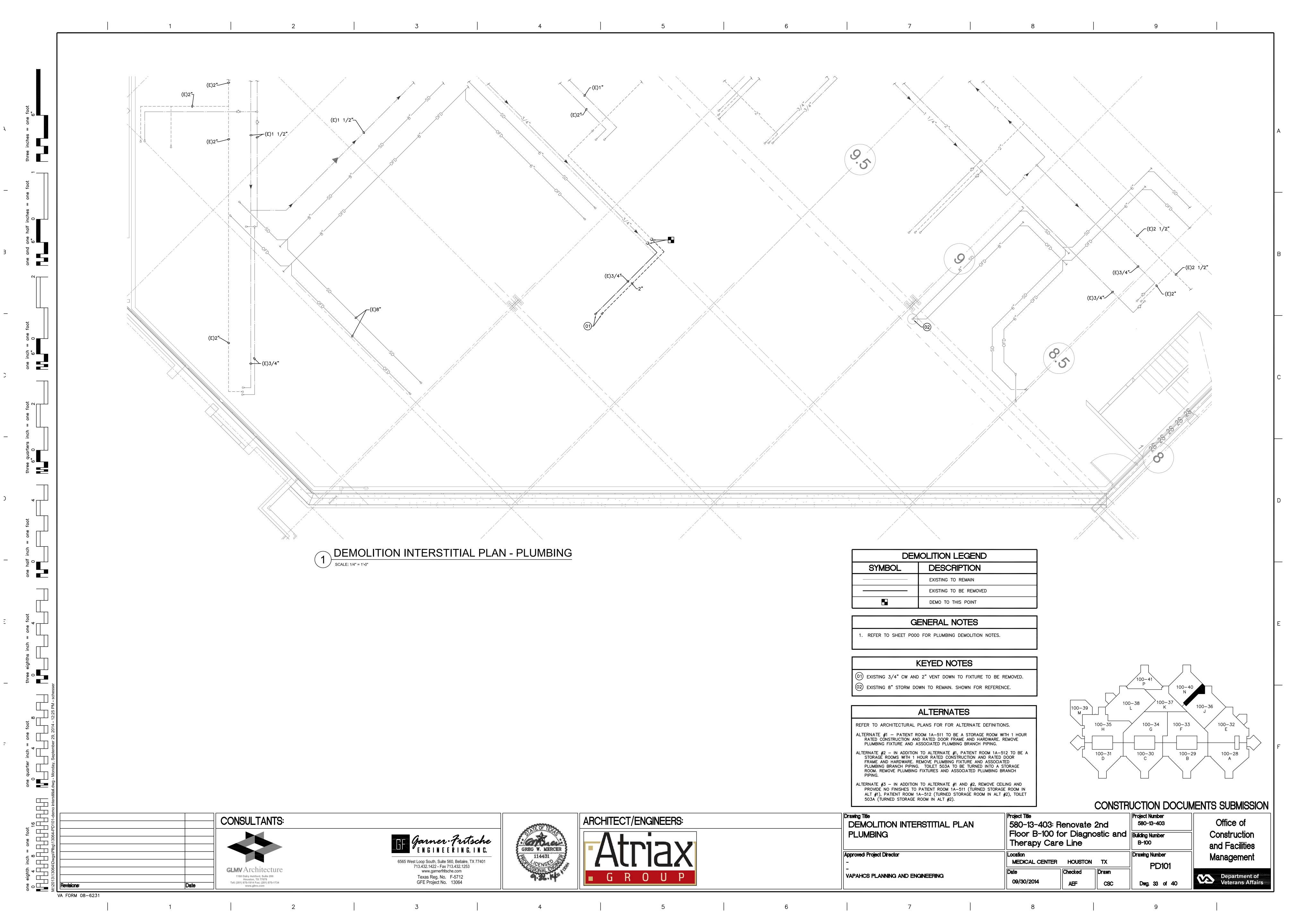
580-13-403

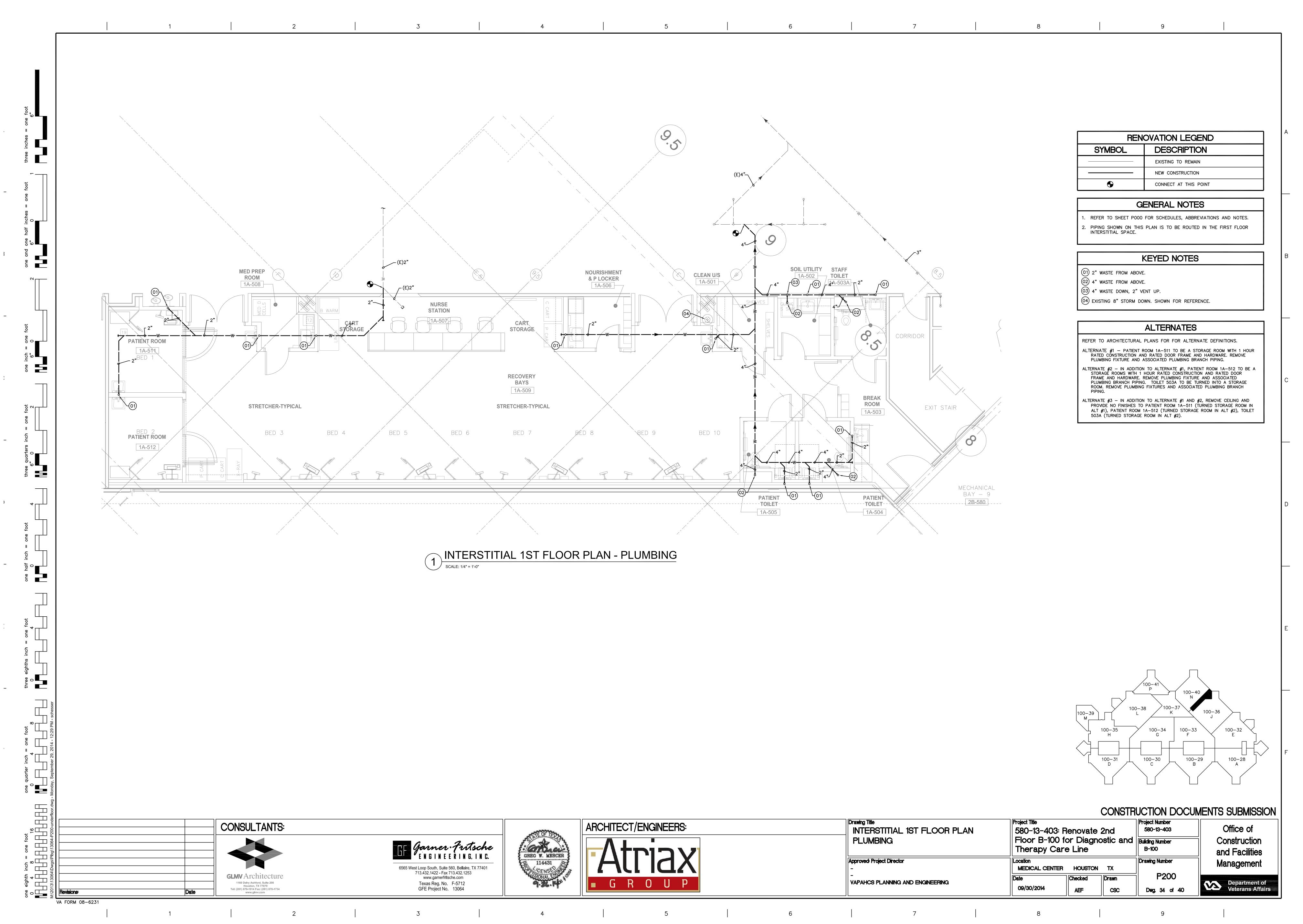
Office of

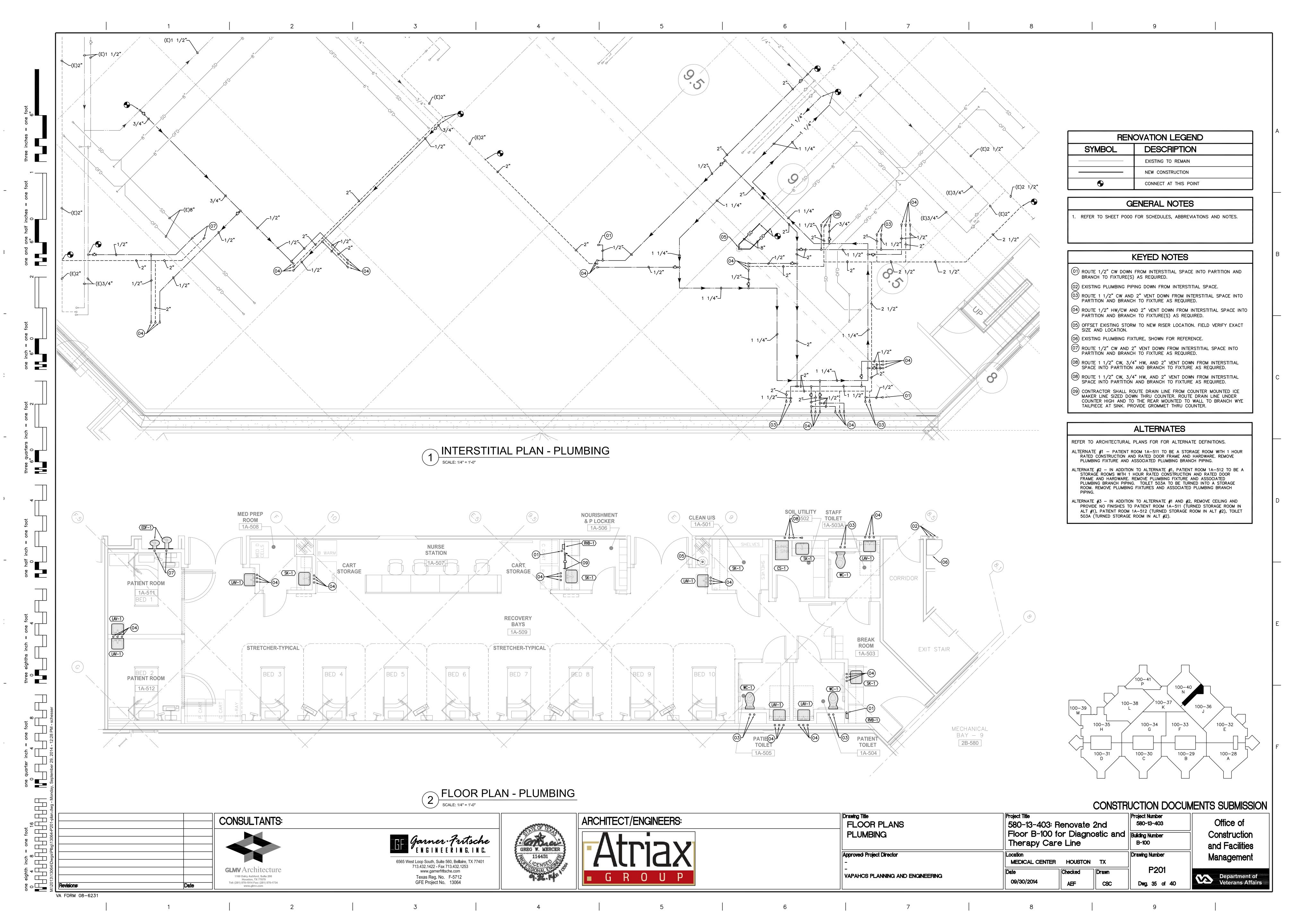
Construction

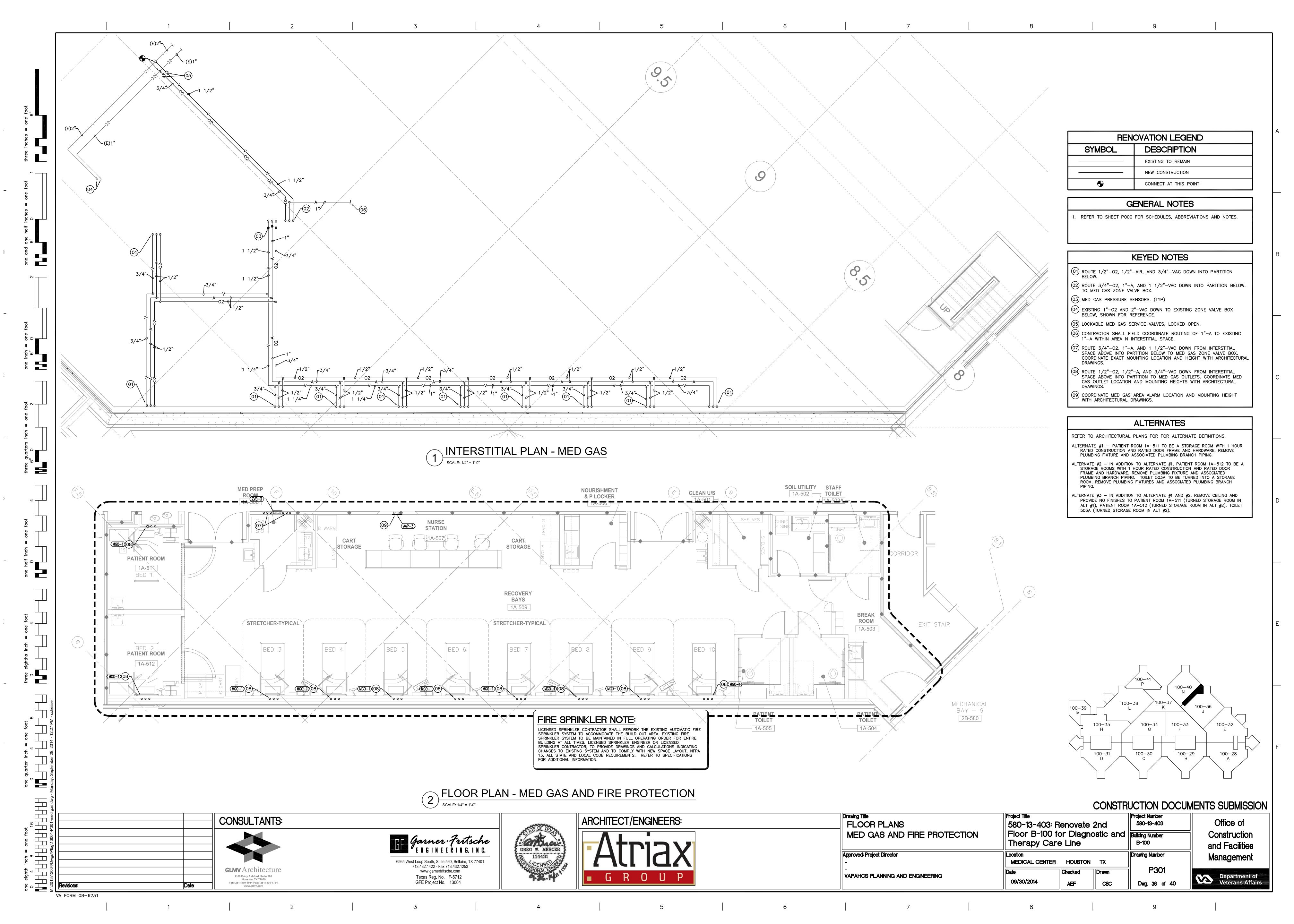
and Facilities

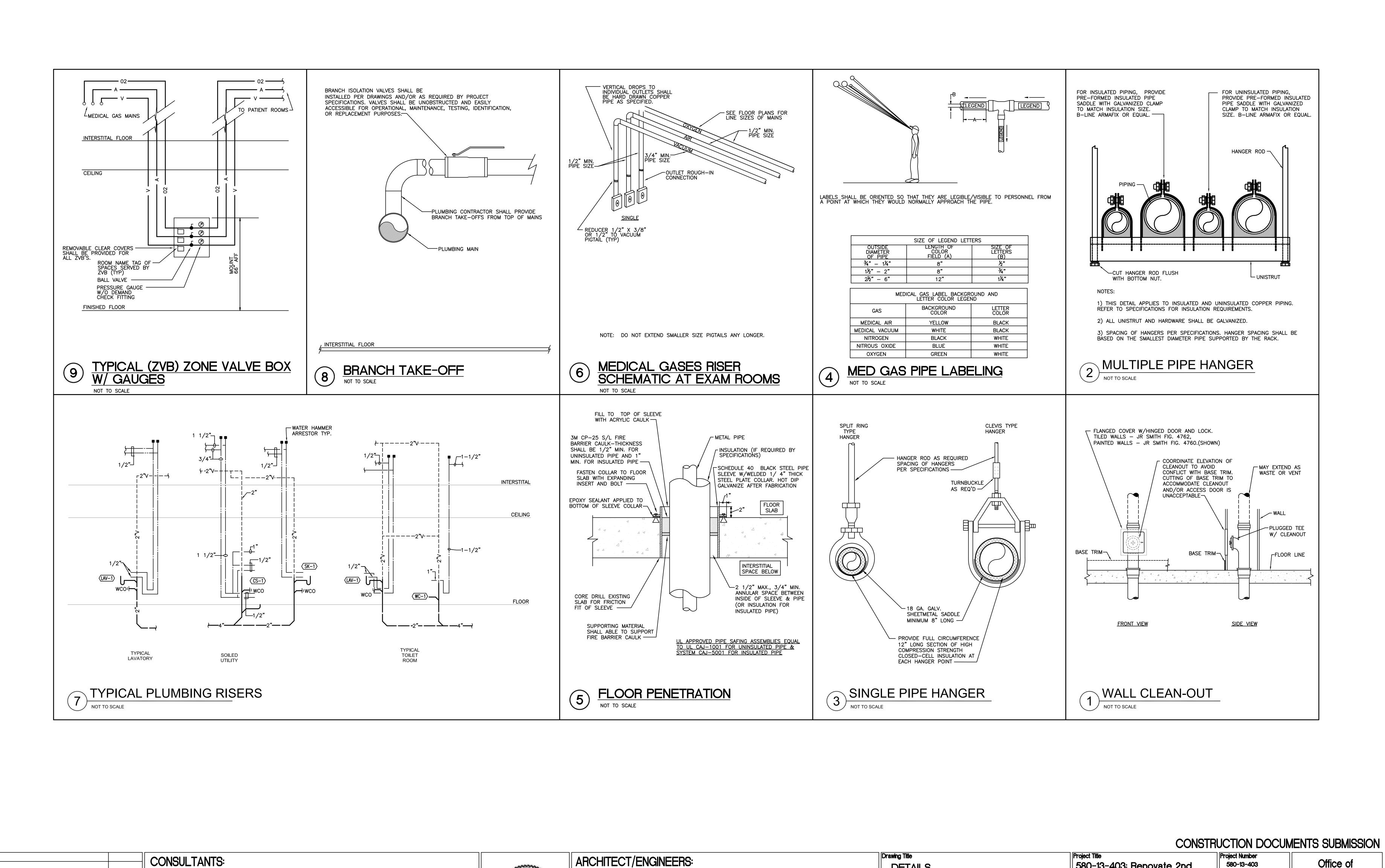












Gengineer-Fritsche Engineering, in C. 6565 West Loop South, Suite 560, Bellaire, TX 77401 713.432.1422 - Fax 713.432.1253 www.garnerfritsche.com Texas Reg. No. F-5712 GFE Project No. 13064

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VA FORM 08-623



DETAILS PLUMBING Approved: Project Director VAPAHCS PLANNING AND ENGINEERING

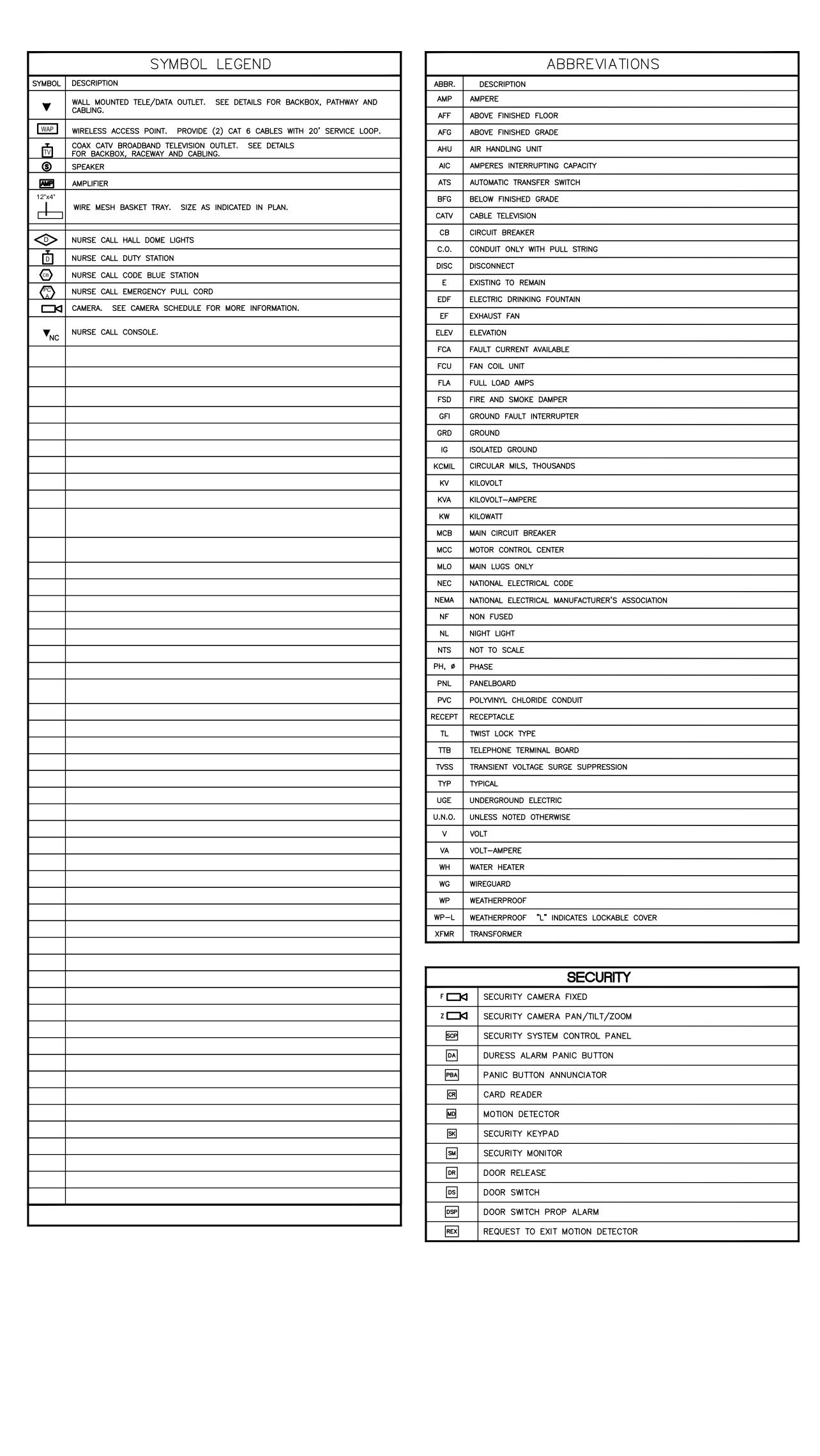
580-13-403: Renovate 2nd Floor B-100 for Diagnostic and **Building Number** Therapy Care Line Drawing Number MEDICAL CENTER HOUSTON TX Checked

09/30/2014

B-100

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Office of Construction and Facilities Management

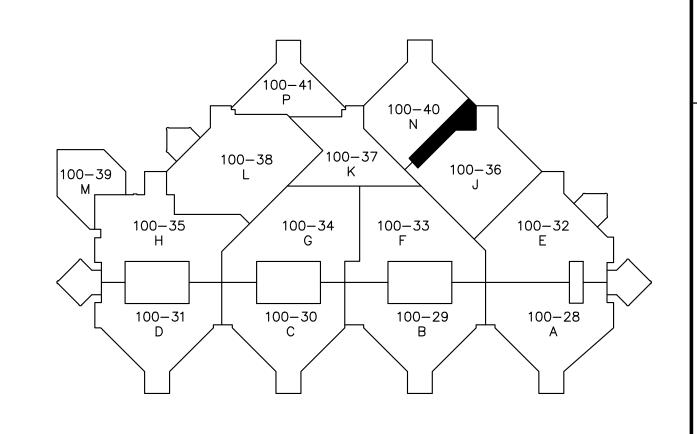


GENERAL NOTES

- ALL EQUIPMENT, MATERIALS AND INSTALLATION METHODS AS OUTLINED IN THE EXISTING BASE BUILDING SPECIFICATIONS SHALL APPLY TO THIS PROJECT UNLESS OTHERWISE NOTED ON THESE DRAWINGS. THE OWNER SHALL FURNISH A COPY OF THE BASE BUILDING SPECIFICATIONS TO THE CONTRACTOR FOR THIS PROJECT.
- STANDARD DETAILS ILLUSTRATED ON THE DRAWINGS SHALL BE APPLIED IN ALL CASES WHERE THE FEATURE OCCURS IN THE SYSTEM DESIGN.
- PRIOR TO THE SUBMISSION OF BID, THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING BUILDING CONDITIONS, UTILITY CONNECTIONS, AND PERTINENT BUILDING SERVICES. . COORDINATE ALL PENETRATIONS AND SLEEVE LOCATIONS PRIOR TO ANY FORMING OR
- CORING WORK. DRAWINGS ARE SCHEMATIC IN NATURE AND SHALL NOT BE SCALED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES.
- . REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHTS
- THE ENTIRE CABLING AND SECURITY INSTALLATION SHALL MEET OR EXCEED THE BUILDING SPECIFICATIONS AND AS SPECIFIED ON THE DRAWINGS.
- . ALL CABLING TO BE ROUTED THROUGH SLAB ABOVE INTO WALKER DUCT LOCATED IN
- THE INTERSTITIAL SPACE. ROUTE TO APPROPRIATE IDF PER BUILDING 100 STANDARDS.

9. ALL CABLING TO BE LABELED PER VA AND BUILDING 100 STANDARDS.

	DRAWING INDEX					
NUMBER	DRAWING TITLE					
T000	INFORMATION SHEET — TELECOM					
T201	TELECOM NURSE CALL PLAN					
T401	TELECOM CABLING DETAILS					



CONSTRUCTION DOCUMENTS SUBMISSION

Project Number

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one eighth inch = one foot

0 4 8 16

VA FORM 08-6231

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TELECOM	Therap
Approved: Project Director -	Location MEDICAL
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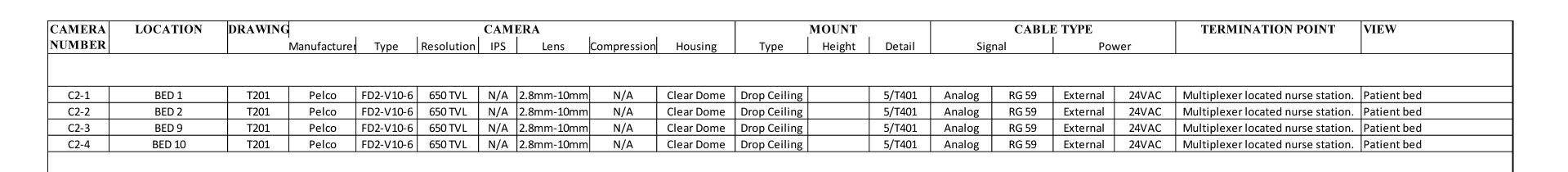
VAPAHCS PLANNING AND ENGINEERING

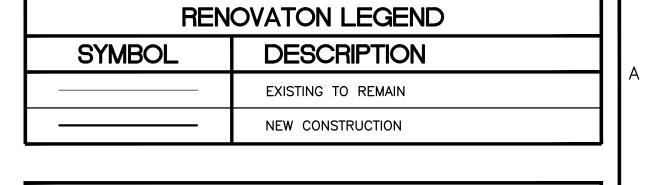
580-13-403: R Floor B-100 fo Therapy Care	580-13-403 Building Number B-100		
Location MEDICAL CENTER	HOUSTON	TX	Drawing Number
Date	Checked	Drawn	T000
09/30/2014	ССН	GP GP	Dwg. 38 of 40

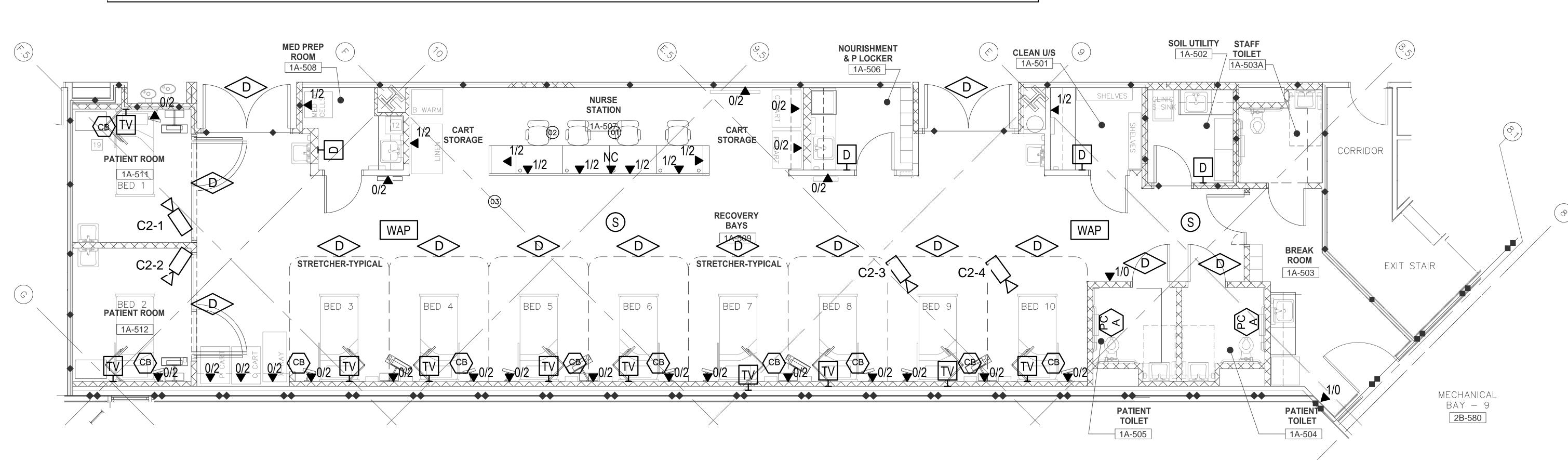
Office of Construction and Facilities Management

Department of Veterans Affairs

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TELECOM/NURSE CALL PLAN

GENERAL NOTES

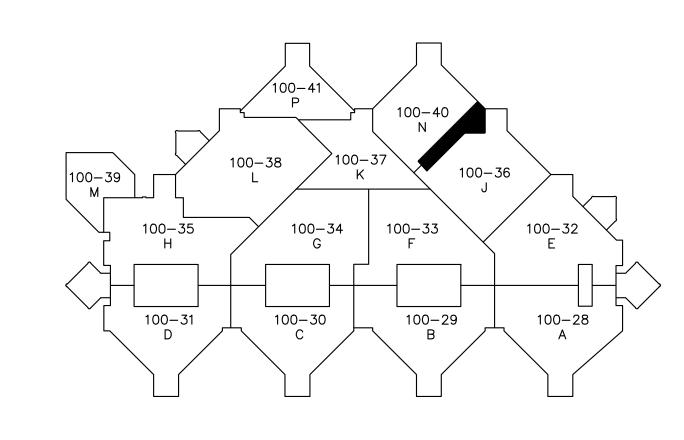
- REFER TO THE GENERAL NOTES ON THE INFORMATION SHEET FOR ADDITIONAL INFORMATION.
- 2. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- . VOICE/DATA OUTLET HEIGHTS AND ORIENTATION ARE NOT INTENDED TO BE SHOWN ON THESE PLANS, REFER TO ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR ALL RECEPTACLE/OUTLET HEIGHTS AND ORIENTATION PRIOR TO INSTALLATION. THE ARCHITECTURAL DRAWINGS AND OWNER SPECIFICATIONS SHALL SUPERSEDE ANY HEIGHT DIMENSIONS THAT ARE SHOWN ON THESE PLANS.
- 4. COORDINATE FINAL WAP LOCATIONS WITH VA ISD PRIOR TO INSTALL. . ALL INFORMATION SHOWN ON THIS DRAWING SHALL BE ASSUMED NEW, PROVIDED AND INSTALLED BY THE CABLING CONTRACTOR UNLESS OTHERWSE NOTED.
- . ALL TELECOM CABLING TO TERMINATE IN NEAREST COMMUNICATIONS
- PROVIDE NEW PATCH PANELS AND 20' CROSS CONNECT CABLES AS NEEDED TO SUPPORT NEW CABLING.
- 8. SUPPORT ALL CABLING PER MANUFACTURER STANDARDS.
- 9. ALL NURSE CALL CABLING TO TERMINATE AT NEAREST NURSE CALL
- 10. ROUTE ALL TV COAXIAL CABLE TO NEAREST AMPLIFIER.

ALTERNATES

- REFER TO ARCHITECTURAL PLANS FOR FOR ALTERNATE DEFINITIONS.
- ALTERNATE #1 PATIENT ROOM 1A-511 TO BE A STORAGE ROOM WITH 1 HOUR RATED CÖNSTRUCTION AND RATED DOOR FRAME AND HARDWARE. REMOVE ALL TELECOM DEVICES.
- ALTERNATE #2 IN ADDITION TO ALTERNATE #1, PATIENT ROOM 1A-512 TO BE A STORAGE ROOMS WITH 1 HOUR RATED CONSTRUCTION AND RATED DOOR FRAME AND HARDWARE. REMOVE ALL TELECOM DEVICES.
- TOILET 503A TO BE TURNED INTO A STORAGE ROOM. REMOVE ANY NURSE CALL DEVICES.
- ALTERNATE #3 IN ADDITION TO ALTERNATE #1 AND #2, REMOVE CEILING AND PROVIDE NO FINISHES TO PATIENT ROOM 1A-511 (TURNED STORAGE ROOM IN ALT #1), PATIENT ROOM 1A-512 (TURNED STORAGE ROOM IN ALT #2), TOILET 503A (TURNED STORAGE ROOM IN ALT #2).

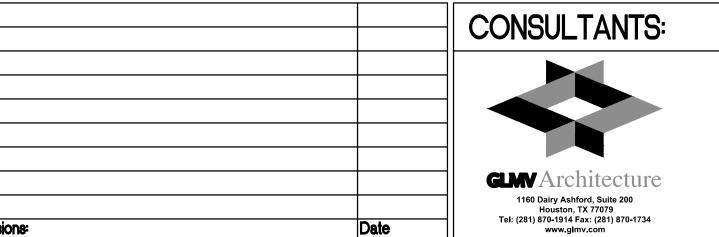
KEYED NOTES

- UTILIZE NURSE CALL SYSTEM TO PROVIDE DIRECT INTERCOM BETWEEN NURSE CALL MASTER STATION AND THE FOLLOWING ROOMS: 2C-448, 435, 439, 409, 411, 405.
- PROVIDE 17" MONITOR WITH QUAD VIEW MULTIPLEXER FOR PATIENT ROOM CAMERAS. PROVIDE MINI COAXIAL CABLE FROM EACH CAMERA TO MULTIPLEXER. COORDINATE WITH USER FOR FINAL LOCATION OF
- CAMERA POWER SUPPLY. ALTRONIX ALTU244UL OR EQUIVALENT. MOUNT IN ACCESSIBLE SPACE. PROVIDE 18-2 POWER CABLE FROM POWER SUPPLY TO EACH CAMERA.



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CONSTRUCTION DOCUMENTS SUBMISSION Project Number



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GFE Project No. 13064

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Drawing Title
TELECOM NURSECALL **PLAN** Approved: Project Director

VAPAHCS PLANNING AND ENGINEERING

580-13-403 580-13-403: Renovate 2nd Floor B-100 for Diagnostic and Building Number Therapy Care Line B-100 Drawing Number MEDICAL CENTER HOUSTON TX Checked 09/30/2014 CCH

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